EFFECTIVENESS OF SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CORONARY ARTERY BYPASS GRAFT (CABG) CLIENTS ON KNOWLEDGE AND ATTITUDE AMONG NURSES AT SELECTED HOSPITAL, TRIVANDRUM, 2015

DISSERTATION SUBMITTED TO

THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY

CHENNAI

IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

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Internal examiner:

External examiner:

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Certified that this is the bonafide work of

Ms. D. ANISHA MARY

Omayal Achi College of Nursing

No.45, Ambattur Road, Puzhal,

Chennai- 600 066

COLLEGE SEAL:

SIGNATURE :

Dr. (Mrs) S. KANCHANA

B.Sc. (N)., R.N., R.M., M.Sc (N)., Ph.D., Post Doc (Research).,

Principal & Research Director, ICCR,

Omayal Achi College of Nursing,

Puzhal, Chennai - 600 066, Tamil Nadu.

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Approved by the Research Committee in December, 2014.

PROFESSOR IN NURSING RESEARCH
Dr. (Mrs) S. KANCHANA _____
B.Sc.(N)., R.N., R.M., M.Sc(N)., Ph.D., Post. Doc. (Res).,
Principal & Research Director,
Omayal Achi College of Nursing,
Puzhal, Chennai-600 066,Tamil Nadu.

MEDICAL EXPERT
Dr. (Mr) K. GANAPATHY SUBRAMANIAM _____
M.B.B.S., M. Ch., (CTVS) A.I.I.M.S,
Consultant Paediatric and Adult,
Congenital Cardiac Surgeon,
Fortis Malar Hospital,
Adayar, Chennai- 600 020, Tamil Nadu.

CLINICAL SPECIALITY- HOD
Prof. Mrs. M. SUMATHI _____
B.Sc. (N)., R.N., R.M., M.Sc.(N)., (Ph.D).,
Head of the Department,
Medical Surgical Nursing,
Omayal Achi College of Nursing,
Puzhal, Chennai-600 066, Tamil Nadu.

CLINICAL SPECIALITY-RESEARCH GUIDE
Mrs. S. SASIKALA _____
B.Sc. (N)., R.N., R.M., M.Sc.(N).,
Assistant Professor,
Medical Surgical Nursing,
Omayal Achi College of Nursing,
Puzhal, Chennai-600 066, Tamil Nadu.

DISSERTATION SUBMITTED TO

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY

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LIST OF ABBREVIATIONS

AHA	-	American Heart Association
ANOVA	-	Analysis Of Variance
CABG	-	Coronary Artery Bypass Graft
CAD	-	Coronary artery disease
CDC	-	Centre for Disease Control and Prevention
CDI	-	Cardiovascular Disease Initiatives
CVD	-	Cardiovascular disease
CT	-	Cardio Thoracic
ICU	-	Intensive Care Unit
IJMR	-	Indian Journal Of Medical Research
ND	-	No Data
NIIMS	-	Nooral Islam Institute of Medical Science
SD	-	Standard Deviation
WHO	-	World Health Organization
WHF	-	World Heart Federation

LIST OF SYMBOLS

$>$	-	Greater than
$<$	-	Less than
$=$	-	Equal to
$\geq$	-	Greater than or equal to
$\leq$	-	Less than or equal to
$\pm$	-	Plus or minus

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ABSTRACT

Effectiveness of self instructional discharge protocol for Coronary Artery Bypass Graft (CABG) clients on knowledge and attitude among nurses, at selected hospital, Trivandrum.

Aims & objective: To assess the effectiveness of self instructional discharge protocol for Coronary Artery Bypass Graft (CABG) clients on knowledge and attitude among nurses at selected hospitals, Trivandrum. **Methodology:** A pre experimental study was conducted at Nooral Islam Institute of Medical Science, Trivandrum. The samples consisted of 51 nurses who were selected by non probability purposive sampling technique. The pre test level of knowledge and attitude were assessed by structured knowledge questionnaire and 4 point Likert scale, followed by this a Booklet on Self Instructional Discharge Protocol for CABG clients was given to the nurses and post test level of knowledge and attitude was assessed using same questionnaire. **Results:** The findings of the study revealed that the pre test mean knowledge score was 16.33 with SD of 1.95 and the post test mean knowledge score was 22.54 with SD of 1.39, the calculated paired 't' value was t = 19.295 which revealed high statistical significance at $p<0.001$ level. The pre test mean attitude score was 27.60 with SD of 2.31 and the post test mean was 34.09 with SD of 2.28, the calculated paired 't' value was t = 15.042 which revealed high statistical significant at $p<0.001$ level. **Conclusion:** The study findings revealed, after the administration of Self Instructional Discharge Protocol there was an improvement in knowledge and attitude among the nurses. Thus Self Instructional Discharge Protocol was an effective intervention in improving the knowledge and attitude among the nurses.

Key words: *Self Instructional Discharge Protocol, CABG, Knowledge, Attitude, Nurses.*

INTRODUCTION

Cardiovascular disease is a condition that involves narrowed or blocked blood vessels that leads to Heart attack. The most common cardiovascular problem is Coronary Artery Disease secondary to atherosclerosis, the second global leading cause of death among all cardiovascular diseases. Atherosclerosis is a condition that develops when a substance called plaque buildsup in the wall of arteries, which narrows the arteries, making it harder for blood to flow trough. Blood clot stops the blood flow completely and cause heart attack. When the occlusion occurs in **"three blood vessels"** CABG is the integral to treat Cardiovascular Disease.

OBJECTIVE

To assess the effectiveness of Self Instructional Discharge Protocol for CABG clients on knowledge and attitude among nurses.

NULL HYPOTHESES

NH_1: There is no significant difference in the pre and post test level of knowledge and attitude on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ level.

METHODOLOGY

Pre experimental one group pre test post test design was adopted for this study. The independent variable was self instructional discharge protocol for CABG clients and dependent variable was knowledge and attitude. The study was conducted in Cardio Thoracic Intensive Care Unit, Post Operative ward, AG and SS block, Old and New pay ward at Nooral Islam Institute of Medical Science Hospital, Trivandrum. The sample size of this study consisted of 51 nurses who fulfilled the inclusion criteria were selected using non- probability purposive sampling technique. Pre test level of knowledge and attitude was assessed using structured knowledge questionnaire and 4 point Likert scale prepared by the investigator, followed by this booklet on self instructional discharge protocol for CABG clients was administered and post test level of knowledge and attitude was assessed using the same tool.

RESULTS

The analysis of the study findings revealed that the effectiveness of self instructional discharge protocol for CABG clients was assessed by comparing pre test level of knowledge and attitude among nurses with post test level of knowledge and attitude using paired 't' test. The level of knowledge in pre test mean score was 16.33 and S.D 1.95 and the level of knowledge in post test mean score was 22.54 and S.D 1.39, the calculated 't' value t 19.29. This shows the high statistical significance between pre test and post test level of knowledge at $p<0.001$ level. The pretest mean score of attitude was 27.60 with S.D 2.31 and the post test mean score of attitude was 34.09 with S.D 2.28, the calculated 't' value t 15.042. This shows the high statistical significance between pre and post test level of attitude at $p<0.001$ level.

DISCUSSION

Self Instructional Discharge Protocol for CABG clients was effective in improving the level of knowledge and attitude among nurses.

IMPLICATION IN NURSING PRACTICE

Self instructional discharge protocol for CABG clients helps nurses to provide uniform and wholesome package of discharge instruction for all the CABG clients, also helps to boost the image of the nurses as an indispensable member of the health care team with their own scientific body of knowledge and scope of practice.

The nurse educator should be competent enough to train the students in administering the CABG discharge education with or without using supporting educational packages in improving the quality of life and reduction in post surgical complications.

CONCLUSION

The present study assessed the effectiveness of self instructional discharge protocol for CABG clients among nurses at Nooral Islam Institute of Medical Science hospital, Trivandrum. The findings of this study revealed that booklet on self instructional discharge protocol for CABG clients was effective in improving the level of knowledge and attitude among nurses. Hence the researcher concluded that developing protocol regarding self instructional discharge protocol for CABG clients has enhanced the nurses knowledge and attitude through that we can improve our standards of nursing practice and able to provide quality care to the patient.

CHAPTER-1

INTRODUCTION

INTRODUCTION

The heart is the human body's hardest working organ. Throughout life it continuously pumps blood enriched with oxygen and vital nutrients through a network of arteries to all tissues of the body. To perform this task, the heart muscle itself needs a plentiful supply of oxygen-rich blood, provided through a network of coronary arteries. These arteries carry oxygen-rich blood to the heart's muscular walls.

Cardio Vascular Diseases (CVD) is one of the major incidence of non-communicable diseases and leading causes of deaths in India. Coronary Heart Disease (CHD) is a disease of the blood vessels supplying the heart muscle that can lead to a heart attack. A heart attack (myocardial infarction) occurs when blood flow to the heart muscle is blocked, and tissue death occurs from loss of oxygen, severely damaging a portion of the heart.

Coronary artery disease (CAD) is becoming a major health challenge in India. The increase in the incidence of coronary artery disease is secondary to the effect of modernization, results in increased levels of stress, changes in eating habits and less physical activity are leading to more heart disease and stroke. Timely drastic steps in lifestyle optimization, heart wellness programs, effective medical and interventional management may help us in reducing the rising of coronary artery disease in India.

The main treatment modalities are drug therapy, nutritional therapy, coronary surgical revascularization, percutaneous coronary interventions and coronary artery bypass graft surgery.

Coronary Artery Bypass Graft (CABG) is one of the most commonly performed surgical procedure to restore the blood flow to the heart, when a blockage occurs in two or three arteries CABG surgery is performed, it has become a very common surgery nowadays. Thousands of patients undergo surgery all over the world every day. CABG patients have to take some precautions and modifications in their life style to improve the quality of life and to prevent further recurrence of the problem.

Nurses have a great role in preventing postoperative complications of patients with coronary artery bypass graft surgery. Participation in the education program maximizes their ability to regain independence and provides the knowledge to ensure healthy living and that becomes a permanent part of their future. Nursing interventions such as patient education on disease condition, treatment modalities, home care management, adherence to cardiac rehabilitation and the importance of follow up have demonstrated benefits in patients after CABG surgery. The addition of an hour of nurse educator-delivered teaching session at the time of hospital discharge and issuing the booklet regarding home care management resulted in improved clinical outcomes, increased self care measure adherence and reduced cost of care in patients after CABG surgery.

1.1 **BACKGROUND OF THE STUDY**

Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. Some would consider it idealistic and non realistic, as this definition categories majority of people are unhealthy. Health status of an individual may be positively influenced by the well being and experience of comfort, individuals who are hospitalized for a wide range of acute illness and injuries **(World Health Organization, WHO).**

The “heart disease” is often termed as “cardiovascular disease", which is generally referred to conditions that involve narrowed or blocked blood vessels that can lead to chest pain (angina), heart attack or stroke. Other heart conditions, such as those that affect the heart muscles, valves or rhythm are also considered to be forms of heart disease.

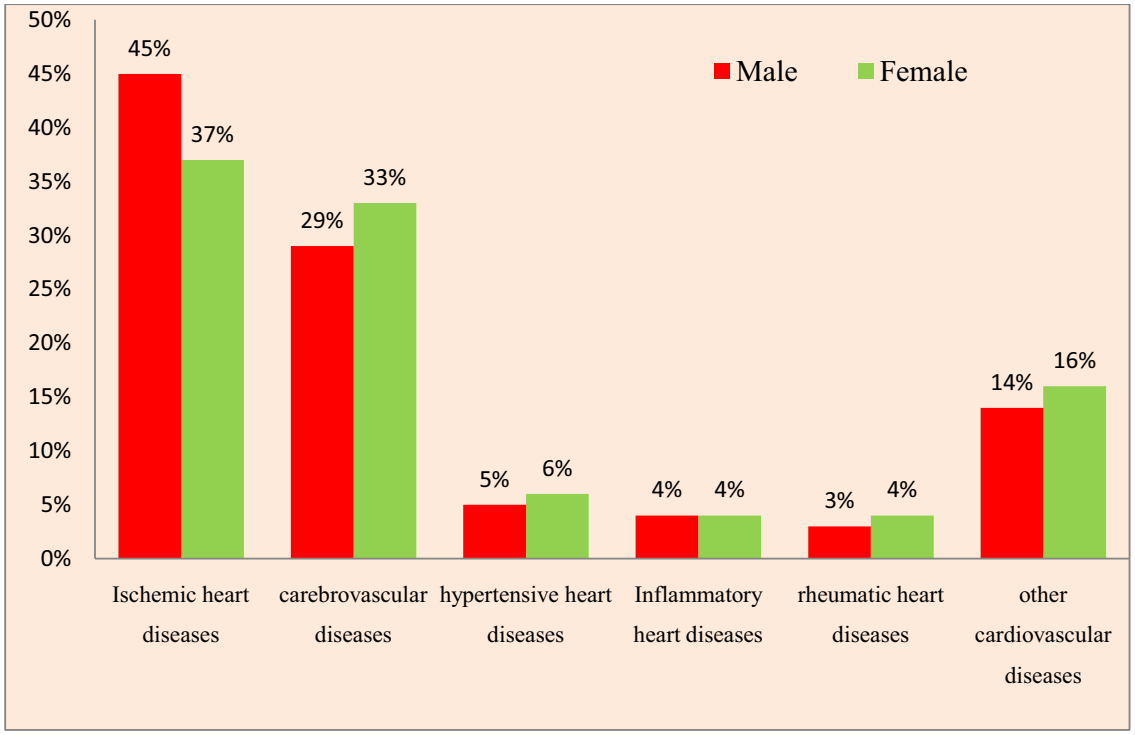


Figure 1.1.1: Shows the global distribution of Cardio Vascular Disease burden

(SOURCE: World Heart Federation and World Stroke Organization, 2011)

Heart failure is also known as congestive heart failure, is a condition or a collection of symptoms in which the heart is not pumping enough blood to meet the body's needs and which affect the heart valves and doesn't open enough to allow the blood to flow called as Stenosis. When the heart valves doesn't close properly and allow the blood to leak through is known as Regurgitation. Arrhythmia is an abnormal rhythm of the heart, were the heart beats too slow, too fast or irregularly. **(Mayo Clinic, 2014)**

Atherosclerosis is a condition that develops when a substance called plaque builds up in the walls of the arteries, which narrows the arteries, making it harder for blood to flow through. A heart attack or stroke occurs when the blood flow to a part of the heart is blocked by a blood clot. If this clot cuts off the blood flow completely, the part of the heart muscle supplied by that artery begins to die.

Table 1.1.1: Shows the heart problems and its treatment

Problems	Treatments
Heart Valves	Medications Heart Valve Surgery
Arrhythmia	Medications Pacemaker Cardiac Defibrillation
Heart Attack	Coronary Angioplasty **Coronary Artery Bypass Graft Surgery**
Stroke	Medications — clot busters

(SOURCE: American Heart Association, 2015)

Cardiovascular disease (CVD) is the leading cause of global death, accounting for 17.3 million deaths per year, a number that is expected to grow to more than 23.6 million by 2030. In 2008, cardiovascular deaths represented 30 % of all global deaths, with 80 % of those deaths taking place in low- and middle-income countries**. (Cardiovascular Disease Initiative, 2012)**

India is projected to expense approximately 236 billion between 2005-2015 due to CVDs and diabetes, address the issue of rising CVDs, urban India has made considerable progress in delivering high quality diagnostics and interventional cardiac care.

Indian hospitals perform over 60,000 heart surgeries a year, cardiovascular disease is considered a major problem and one of the major causes of death worldwide. WHO estimates that by 2020 close to 60 percent of cardiac patients worldwide will be Indian. The incidences of CVD have significantly for people between the ages 25 and 69 to 24.8%, which means we are losing more productive people to these diseases.

The incidence of cardiac problems is high among the younger age presenting with Triple Vessel Disease (TVD); double vessel disease; distal disease and severe left ventricular dysfunction. The high prevalence of Triple Vessel Disease (35%) was reported in non-smoking pre menopausal women, and 57% in post menopausal women.

(Report: Perspectives of Coronary Interventions, New Delhi, 2012)

Coronary artery bypass grafting is the therapy that is mainly used to treat the patient whose coronary artery are severely blocked i.e., mainly triple vessel disease. CABG is done based on the severity of the symptoms and the extent of the disease. The main goal of this surgery is to relieve the symptoms of coronary artery disease, mainly the angina, and also to lower the risk of suffering from heart attack or other cardiac incident and to bring back the patient to a normal life style. **(Centre for Disease Control and Prevention, 2012)**

Table 1.1.2: Shows the total number of surgeries performed in cardiac care centers of Canada

Year	Indicator	Duration	Isolated CABG	Isolated AVR	Combined AVR/CABG
2008-2009	Surgery	-	6809	840	761
	Mortality	In Hospital	1 – 3.5%	0.85 – 3.8%	-
		30 days	1.3 – 3.5%	0.38 – 3.5%	-
		1 year	2.8 – 5.7%	2.5 – 4.5%	-
2009-2010	Surgery	-	6665	849	782
	Mortality	In Hospital	0.5 – 3.8%	0.6 – 3.5%	-
		30 days	0.75 – 2.5%	0.35 – 3.2%	-
		1 year	2.6 – 5.8%	2.3 – 4.8%	-
2010-2011	Surgery	-	6303	920	791
	Mortality	In Hospital	0.86 – 3.5%	0.91 – 4.17%	3.36 – 9.26%
		30 days	0.66 – 2.87%	0.48 – 3.77%	2.24 – 9.12%
		1 year	ND	ND	ND

ND - No data **(Cardiac care centers, Ontario, Canada, 2013)**

Stroke and other cardiovascular disease is the number one cause of death in the United States, and cause death of nearly 787, 000 people in 2011. The most common type is the coronary heart disease killing nearly 380,000 people annually. In United States, for about every 34 seconds someone has heart attack and every 60 seconds, someone in the United States dies from a heart disease related event and around 720,000 people suffer from heart attack every year and of these 515,000 are a first heart attack and 205,000 people have already heart attack. An estimated 43 million women in the U.S are affected by heart disease.90% of women have one or more risk factors for developing heart diseases. **(American Heart Association- heart disease and stroke, 2015)**

Total number of cardiac procedure performed per year for Arteriography and Angiocardiography is 2.4 million; cardiac catheterization- 1.0 million; Balloon angioplasty of coronary artery or coronary atherectomy- 500,000; Insertion of coronary artery stent- 454,000; CABG- 395,000. **(National Hospital Discharge Survey, 2010)**

Risk of death during coronary artery bypass surgery or before the patient leaves the hospital is approximately 2- 4%; Stroke occurs 1-2% after bypass and commonly affects the most elderly people; graft failure about 5- 10% after bypass surgery and cut off blood flow to the bypassed artery within 1 year.

The **mortality rate increases in patients** with age more than 70 years; already who had poor health before the time of surgery; disease in the left main coronary artery; patient with Diabetes; chronic lung problems; smokers; excessively over weight; women usually had heart attack at an older age than men, the average being 70 years**. (Asian Heart Institute, 2013)**

Long term bypass surgery statistics are: 5 yrs following the surgery the survival expectancy is 90%; for after 10 yrs 85%; 15 yrs 55% and 20yrs later 40%. The 2 main reasons for low survival rate after 15 yrs and beyond are: older age and bypass grafts had a larger likelihood of causing problems after a long period of time. Stroke occur in 5- 6% of populations, but only 2% were severe; 60% have full relief from chest pain and resumed normal life pattern; 3- 4 % of patients need exploration for bleeding. **(Heart Bypass Surgery Statistics, 2013)**

According to 2008 estimates, cases of CVD increase from about 2.9 crores in 2000 to 6.4 crores in 2015. Epidemiological studies showed a burden of CAD in rural (3-5%) and urban (7- 10%) populations, and the number of deaths from CVD will also becomes double. By the year 2020, the burden of atherothrombotic CVD in India will overcome the other regions of the world. **(Indian Journal of Medical Research, 2010)**

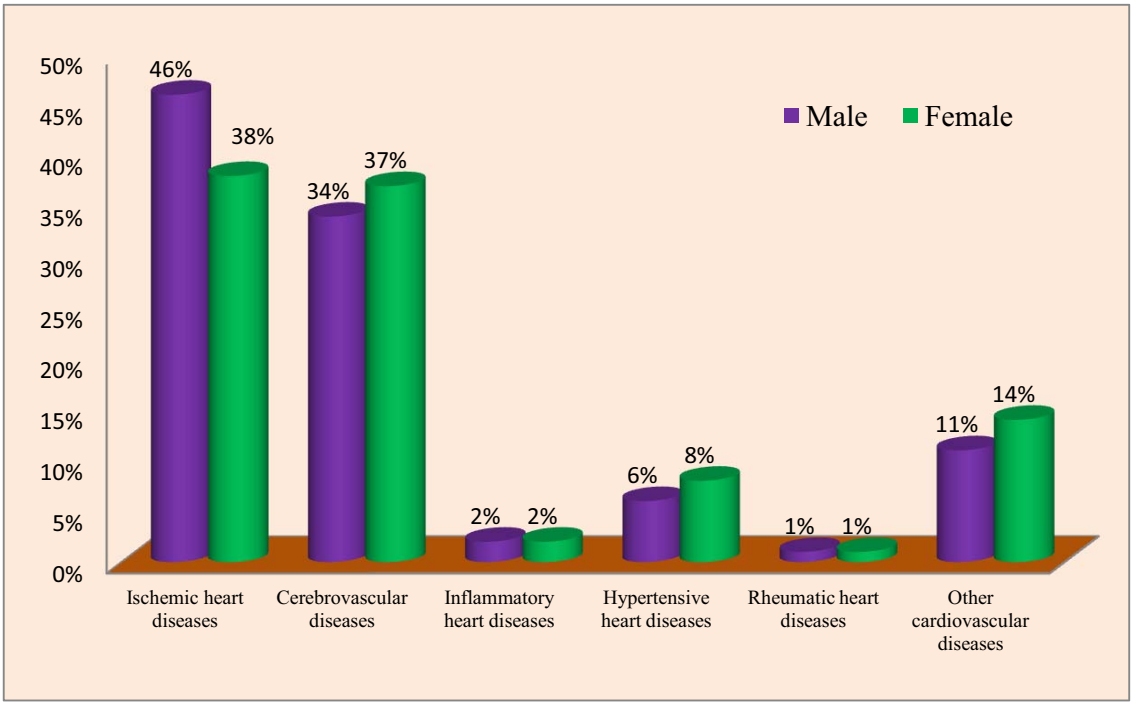


Figure 1.1.2: Percentage of death due to Cardio Vascular disease
(SOURCE: Global Atlas on Cardiovascular disease prevention and control, 2011)

Coronary artery bypass graft surgery (CABG) was first performed in India in 1975 after its advent in 1962. In the mid 1990 around 10,000 CABG surgeries were performed annually in India. Presently the annual number is about 60,000 according to industry sources.

High prevalence of CAD in India has lead to the increased number of CABG and Percutaneous Transluminal Coronary Angioplasties being performed every year. In 1980's CABG accounts for only 10% among all cardiac surgeries. Today it accounts for about more than 60% of CABG performed every year. Diabetes plays an important role in influencing operative and in- patient morbidity and mortality in CABG patients.

In 2009, worldwide annually around 1,313,000 inpatient Percutaneous Coronary Interventions procedures, 448,000 inpatient bypass procedures and more than 800,000 CABG procedures were performed **(AHA, 2011)**

An estimated 47 million Indians had coronary artery disease (CAD) in 2011. Indian persons undergoing bypass surgeries were often young (average age of 60 yrs) and yet had high burden of modifiable CVD risk factors. The prevalence of Obesity (BMI>25) 51%; Diabetes 48%; Hypertension 71%; Smoking 41% and High LDL-C>100 mg/dl 86%. Early and aggressive attention would drastically reduce the need for coronary procedures.

There has been an increase in coronary procedures (25 – 30 %) over past several years. The CABG surgeries were increasing in India and around 60,000 surgeries are done annually. Endarterectomy is needed frequently, because of advance diffuse plaque buildup from malignant heart disease. **(American College of Cardiology, 2012)**

1.2 SIGNIFICANCE AND NEED FOR THE STUDY

The global burden of cardio vascular disease is rapidly increasing due to rise in the incidence and prevalence in the developing countries. India, a developing country is now in the middle of the coronary artery epidemic. Several surveys showed the prevalence of CAD aged >35 yrs is 10% mainly among the urban adults. In India the increased prevalence of cardiac risk factor is mainly due to greater severity and extent of CAD including diabetes, hypertension, and dyslipedemia increased markedly in India.

Masoumeh Akbar Sevilay Senol Celik.,(2015) conducted a semi- experimental study to assess the effect of planned discharge training and counseling on the problems experienced by patients undergoing Coronary Artery Bypass Grafting Surgery (CABG) among 100 patients (50 each in experimental and control group) in surgical department of Syed-al- Shohada cardiology sub-specialty Hospital, Iran. Experimental group received both the discharge advices and counseling and the control group received only the hospital routine medications and measuring the vital signs with no planned training services. The study concluded that discharge training and counseling given to the intervention group had a positive impact on decreasing the problems of the patients and their families namely, re- hospitalization and health care costs.

Ewelina Bak and Czeslaw., Marcisz., (2014) conducted a quasi- experimental study aimed at monitoring the quality of life, considering cognitive function, depression, and activities of daily living among 130 elderly patients (65 each in experimental and control group). Experimental group included 65 patients (29 women and 36 men) aged 61- 74 years with stable coronary heart disease. The control group included 65 patients (29 women and 36 men) aged 61-74 who were not suffering from coronary heart disease. The monitoring of the patients were done before surgery, 6 and 12 months after surgery. The study findings revealed that Quality of life is lower in control group for both men and women and in experimental group reduction in severity of depression 6 months after the surgery in men and 12 months after the surgery in women.

Mendes RG., Simoes RP., (2010) conducted a randomized control trial study among 47 patients (24 in experimental and 23 in control group) to determine a short-term physiotherapy exercise protocol for post CABG clients, at cardiac tertiary care unit, Canada.

Experimental group patients underwent an early mobilization with progressive exercises plus usual care (respiratory exercises) and the Control group received only respiratory exercises. Outcome measures were included linear and non-linear measures of Heart Rate Variability (HRV) assessed before discharge. At the time of hospital discharge, experimental group presented significantly higher parasympathetic heart rate variability values than the control group. Physiotherapy exercise protocol during inpatient improves at the time of discharge. This study concluded that during the time of patient discharge adequate advices regarding home care exercise help to reduce the complications.

RR.Kasliwal., Sweta Agarwal., (2009) conducted a cross sectional study in Escorts heart institute and research centre, New Delhi, to identify the common cardiovascular risk factors in Indian people.1000 consecutive patients undergoing elective CABG were included in the present study and detailed information was collected regarding cardiovascular risk factors namely diabetes, hypertension, dyslipedemia, smoking and family history of premature heart disease ,duration of risk factors and any treatment for the same. The mean age of the patients was 59.73 among that 884/1000 were males. 505/904 had BMI>25.0kg/m2 and 747/994 had BMI>

23.0kg/m2.Diabetes 475/1000< hypertension 709/1000, dyslipidemia 781/913, LDL.213/913 had 100 mg/dl, 662/913 had low HDL and 338/913 had elevated triglycerides.199/1000 had premature history of CAD. The study concluded that high prevalence of cardiovascular disease is more risk in patient with mainly diabetes, hypertension, and dyslipidemia in Indian patient undergoing CABG. The co- morbid illness plays an important role in causing cardiovascular diseases. So the researcher predicted that CABG discharge protocol would helps to reduce the further complication after discharge of the patient.

Coronary artery bypass graft surgery is the surgical intervention performed to improve the survival rate and quality of life and also to decrease the symptoms. Even though there is an increase in success rate of procedure, many clients face with physical, psychological and social problem after surgery and re- admission to hospital. Various study showed that re- admission of CABG clients is due to ineffective discharge advice.

The researcher felt that proper discharge training after CABG surgery will reduce the problem experienced by the patient and their families in reducing the re –admission rate to hospital and improve the quality of life. The researcher during the Medical Surgical Nursing posting in the cardiac units and dealing with the CABG clients noticed that due to lack of discharge advices, patient came for re admission with post CABG complications. By keeping this in mind the investigator wanted to communicate the discharge protocol to the nurses and hence put up this proposal to test the effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude among nurses. Thus the researcher was interested in selecting the topic on self instructional discharge protocol for CABG clients.

1.3 STATEMENT OF THE PROBLEM

A pre experimental study to assess the effectiveness of Self Instructional Discharge Protocol for Coronary Artery Bypass Graft (CABG) clients on knowledge and attitude among nurses at selected hospital, Trivandrum.

1.4 OBJECTIVES

1. To assess the pre and post test level of knowledge and attitude regarding self instructional discharge protocol for CABG clients among nurses.
2. To determine the effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude among nurses.
3. To correlate the post test level of knowledge score with attitude score regarding self instructional discharge protocol for CABG clients among nurses.
4. To associate the selected demographic variables with their mean differed level of knowledge and attitude score regarding self instructional discharge protocol for CABG clients among nurses.

1.5 OPERATIONAL DEFINITIONS

1.5.1 Effectiveness

It refers to the outcome of self instructional discharge protocol for CABG clients on level of knowledge and attitude regarding self instructional discharge protocol for CABG clients, assessed using structured knowledge questionnaire and 4 point Likert scale respectively with 1 week of time interval.

1.5.2 Self instructional discharge protocol for coronary artery bypass graft clients

It refers to a self learning booklet that contains set of guidelines prepared by the investigator for the nurses to perform while preparing CABG clients for discharge. It comprises the following components:

- Pain management
- Wound care
- Drug therapy
- Life style modification(diet, exercise, sleep, stress alleviation)
- Warning signs of complications
- Follow up

The duration of the activity is about 15 – 20 minutes to a group of maximum 15 nurses.

1.5.3 Knowledge

It refers to the level of understanding of nurses and ability to answer the question regarding self instructional discharge protocol which was assessed using the structured knowledge questionnaire devised by the investigator.

1.5.4 Attitude

It refers to the opinion regarding the self instructional discharge protocol for CABG clients among nurses which was measured by 4 point Likert scale devised by the investigator.

1.5.4 Nurses

Registered health care personnel with an educational qualification of B.Sc (N), P.B.BSc (N), Diploma in nursing with experience of more than 6 months in cardiac units working at selected hospitals.

1.6 ASSUMPTIONS

1 Nurses may have some knowledge and attitude on self instructional discharge protocol for CABG clients.

2 Providing self instructional discharge protocol may enhance the level of knowledge and attitude of nurses in preparing CABG clients for discharge.

3 Providing self instructional discharge protocol may prevent the complications among the clients who have undergone CABG.

1.7 NULL HYPOTHESES

NH_1: There is no significant difference in the pre and post test level of knowledge and attitude on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ level.

NH_2: There is no significant relationship between the post test level of knowledge score and attitude score on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ level.

NH_3: There is no significant association of the selected demographic variables with the mean differed level of knowledge and attitude score on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ level.

1.8 DELIMITATION

The study was delimited to a period of 4 weeks.

1.9 CONCEPTUAL FRAME WORK

A conceptual framework is the abstract and logical structure of meaning that guides the development of the study which enables the researcher to link the findings to nursing body of knowledge. I t is the symbolic depiction of the reality, providing a schematic representation of relationships among the phenomena and concepts **(Betty M. Johnson and Pamela. B. Webber, 2005)**

Interaction theories are based on the relationships among the persons. Emphasis is on the person's perceptions, self concept and ability to communicate and perform roles, The goal is achievement through reciprocal interaction.

In view of explaining and relating various aspects of the phenomena being studied relating to the interaction between the nurse investigator and the staff nurses regarding the discharge protocol for CABG clients, the investigator has adopted integrated concepts of **Hildegard E Paplau's interpersonal relationships model and Robert R Carkhuff's Helping and Human Relationships theory** to conceptualize the research study.

In this study the investigator has conceptualized the Orientation phase, Identification phase and Human Relationships, in which the **helper** (nurse investigator) and the **helpee** (nurses with demographic variables such as age, gender, educational status, years of experience dealing with CABG clients, position held in the ward, previous exposure to similar discharge protocol) have identified the felt need. The investigator has done the pre test assessment of existing level of knowledge of staff nurses by utilizing the structured knowledge questionnaire.

In the **Exploitation phase and Helping process,** the helper (nurse investigator) and helpee (staff nurse) together set a new goal which lead to new behavior for the person being helped.

In this study, the exploitation phase and helping process refers to the informal teaching to introduce the concepts of discharge protocol and the administration of discharge protocol foe CABG clients by the investigator (Helper) to the staff nurses (Helpee).

In the **Resolution phase and New behavior,** the helpee adopts new goals motivated by the helper which is the overall goal of helping. In exploring oneself, the personnel seeking help in attempting to understand where the personnel are in relation to where the personnel want to be.

In this study, during the Resolution phase, the post assessment of knowledge is done by structured questionnaire and the assessment of post test attitude is done by modified 4 point Likert scale prepared by the investigator. The new behaviour indicated by positive outcome is the attainment of adequate knowledge and favourable attitude, moderately adequate knowledge and moderately favourable attitude regarding discharge protocol for CABG clients which may be enhanced and negative outcome is indicated by the inadequate knowledge and unfavourable attitude regarding discharge protocol for CABG clients, which may be reassessed and reinforced by further teaching.

The nurse investigator believes that the positive helpee's outcome will lead to the attainment of strengthened uniform evidenced based practice among nurses through the continued utilization of self instructional discharge protocol for CABG clients in future which will improve the optimal quality of living of the CABG clients in the research setting.

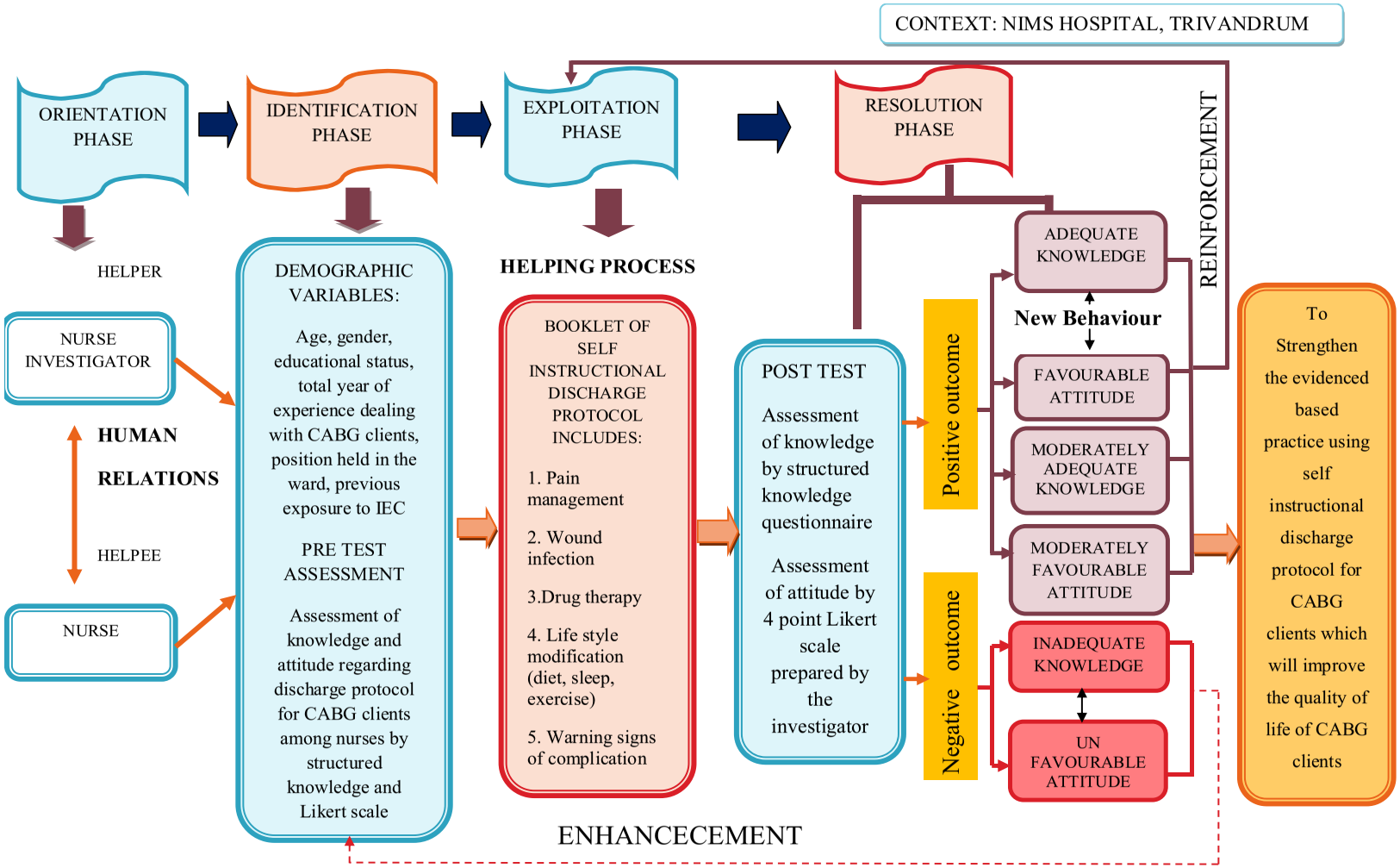


FIG: 1.9.1 BASED ON HILDEGARD PAPLAU'S INTERPERSONAL RELATIONSHIP AND ROBERK CARKHUFF'S HUMAN AND HELPING RELATIONSHIP THEORY

1.10 OUTLINE OF THE REPORT

Chapter 1: Deals with the introduction, background of the study, significance and need for the study, statement of the problem, objectives, operational definitions, assumptions, null hypothesis, delimitation and conceptual frame work.

Chapter 2: Focuses on critical reviews related to the present study.

Chapter 3: Presents the methodology of the study.

Chapter 4: Focuses on data analysis and data interpretation.

Chapter 5: Enumerates the discussions and findings of the study.

Chapter 6: Gives the summary, conclusion, implications, recommendations and limitations of the study.

The study report ends with selected References and Appendices.

CHAPTER-2

REVIEW OF LITERATURE

REVIEW OF LITERATURE

Literature review is defined as a summary of research on a topic of interest often prepared to put a research problem in context (Polit and Beck, 2008).

Literature review is a review of the evidence on a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant primary research, and to extract and analyze data from the studies that are included (Gerrish & Lacey, 2007).

The researcher entailed systematically searching the literature, selecting relevant studies, assessing the quality of the literature, extracting key information from the selected studies, summarizing, interpreting and presenting the findings, and writing up the research in a structured manner.

This review of literature was done using the key words such as self instructional discharge protocol for CABG clients, knowledge and attitude of staff nurses, quality of life of CABG clients, psychological complications, exercise training post CABG, drug therapy and effectiveness of discharge education. This review was searched based on standard databases such as Cochrane library, Cumulative Index to Nursing and Allied Health, Google Scholar, MEDLINE, PubMed, and other unpublished studies from dissertations. It includes cross-sectional surveys, crossover studies, cohort studies, longitudinal prospective studies systematic reviews, Randomized Controlled Trials (RCTs), quasi-experimental design and pre experimental design that explore the effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude of nurses. Collectively 116 studies were searched out of which 76 relevant and updated studies within the duration of the year 2010-2015 were utilised to support the current research topic. Among the selected 76 supportive studies, 66 were international and 10 were Indian literatures.

2.1 Organisation of Review of Literature

The scientific reviews were placed under various sections.

SECTION 2.1.1: Knowledge and attitude regarding self instructional discharge protocol for CABG clients

- Knowledge and attitude of staff nurses

SECTION 2.1.2: Effectiveness of discharge education and counseling for CABG clients

- Drug therapy for post CABG discharge
- Exercise training
- Psychological complications
- Quality of life of CABG clients

Section 2.1.1: Knowledge and attitude on self instructional discharge protocol for CABG clients

Critical reviews:

Knowledge and attitude of staff nurses

Researchers Binu Xavier (2013) studied that coronary artery bypass surgery imposes a significant burden on patients and their families. Therefore patient and their relatives need help and support from professionals in improving the knowledge and reducing complications, the knowledge on CABG discharge education among nurses revealed that increased in knowledge level after the administration of self instructional module and there is no association to the demographic variables. Ruban David (2014); Melanie (2012) studied that knowledge of lifestyle modifications in the post cardiac clients by the nurses and proved that module is highly effective in improving the level of knowledge.

Multiple authors Neelima K, et al. (2015); Ghule Balasaheb (2014); Beneeta Susan BT; Gireesh GR, (2013) studied the effectiveness of self instructional module on pre and post nursing care and post discharge advices among the health care providers and revealed that increase in the post level of knowledge, exercise training (cardiac rehabilitation) play a major role in reducing the complications and increases the quality

of life among the CABG clients. It also suggested that self instructional module is a useful tool and can be used for further nursing education.

Cathy Catrambone G et al. (2015); Ruth Kleuipell M (2012); Boaz Avitall S (2011) studied the care of elderly patients > 65 years on knowledge, attitude and practice, the nurse demonstrated the care of wound after discharge to the elder patients. Though elderly are more prone to get complications because of their poor physical functioning. Findings revealed that self instructional module has an effective role in improving the level of knowledge and develop positive attitude towards the care of elderly and increased skill and activity among nurses in performing the procedures.

Section 2.1.2: Effectiveness of discharge education and counseling for CABG clients

Effectiveness of discharge education

Nurses play an important role in educating the clients during the time of discharge helps to improve the physical activity and decrease the cardiac mortality. Zahide Tuna; Sevilay Senol Celik (2013) conducted a randomized control study in evaluating the effect of training and counseling regarding functional autonomy and post discharge problem of elderly clients. CABG clients face physical, psychological and social problem after discharge are chest and leg pain, edema in leg incision, numbness, dyspnea, constipation. Anxiety and depression are the common problems, it reduces the activity of daily living and restrict the functional independence. Proper discharge training and counseling decrease the post operative problem in older adults and increase the functional independence.

Multiple researchers Alpar Spor, Sagik (2013) Cebeci; Atlay Yashlara B (2012); Lie Bunch EH (2012); Cebeci, Celik (2009) determined the effects of counseling prior to discharge and identified that it had a positive effects on self care and ability to decrease the post operative problems. Similar authors also studied that home nursing for elderly, had a positive effect on activities of daily living and resolving the health issues and providing self care interventions.

Shirley Moorae S; Nicole T; Thompson (2014) evaluated by three randomized group study regarding the effects of telehealth and telephone discharge intervention by advanced practice nurse for elderly patient. Results revealed that tele-heath monitoring

for elderly patients result in few re-hospitalization and increase in physical activity; whereas in telephone follow-up patients increases in post discharge knowledge about medication and the control group exhibit re hospitalization and cardiac mortality. Nirmal Kaur R, Prem Verma S, Rana Sandeep Singh M (2010) identified the effect of pre teaching in self care activities the findings revealed that after teaching increase in the activity level. Researcher suggested that pre operative teaching is the effective media to increase performance, early recovery and increased quality of life. Mchugh G, et al, (2012); Mc Crone R, et al (2011); Krannich S, et al, (2009) noted the health teaching provided by nurses based on individual condition in reducing the depression and anxiety. Similar authors studied that patient need preparation before surgery and information about handling of drugs and psychological support after procedure in reducing anxiety and depression and helps in reducing the complications.

Karen Theobald N; Anne Mc Murray P (2009) examined the post CABG issues, concerns, need of patient and families after discharge and their perception of unmet needs after 1 year the findings suggested a need to improve in discharge preparation and enhance the home support services.

Drug therapy for post CABG discharge

Gannon R, Louise N, Dixon H (2011); Alexander et al, (2010) evaluated the impact of Lipid lowering agent (Statin) used at 1 and 6 months following CABG surgery. Results showed that prescription of Statin use within a month of CABG discharge independently reduce the risk of cause of mortality and major adverse cardiac events. Prescription of Statin after 6 months showed reduced effect. Fredarick L, Gobel et al, (2010) noticed the lipid lowering agent (statin) in progression of atherosclerosis in saphenous vein graft in patient who had CABG surgery. Results showed the prescription of statin reduces atherosclerosis progression than moderate approach in Left mid circumflex artery.

Multiple researchers Collard CD et al, Oliver J Liakopoulos, Christof Stamm A (2010); Clark et al, (2009) stated Statin pretreatment before cardiac surgery reduce the cardiac mortality and provide a protective effect with respect to post operative outcomes, discontinuation of statin is associated with increase in hospital mortality of CABG clients.

Baigent C et al, (2011) found that statin therapy reduces 5 years incidence of major cardiac events and stroke, it also reveals that statin reduce LDL cholesterol in all patient at high risk of any major vascular event. So the researcher suggests that prescription of statin reduces Cholesterol level and reduce the atherosclerotic plaque formation.

Exercise training after CABG surgery

Exercise is a major component for patients with CAD. CABG patient should perform aerobic exercise 3-5 times per week. Strength training is suggested to perform 2-3 times per week. For the coronary patients, exercises with moderate intensity have been shown to improve functional capacity. Sumide N et al, (2012) examined the aerobic interval training(AIT) and moderate continuous training(MCT) both were given to patient for 4 weeks in rehabilitation centre and 6 months home based, Researcher found aerobic interval training was effective in CABG clients. Chinglan, Jin – Shin Lai M (2010) assessed the effect of exercise training program in patient with CABG results showed that exercise training increases the cardio respiratory function, muscle strength, graft patency and decreased re-admission rate to hospital.

Smith et al, (2011); Bilinska S (2010); Shabani A (2010) assessed the effectiveness of aerobic exercise training administration after 6, 12 weeks, 3 months after the CABG surgery help to increased the physical activity and exercise capacity, it also increases the vital parameters like stroke volume and cardiac output.

Mohldt N (2009); Onishi (2009) aerobic exercises started 2 weeks after surgery and continued till 6 months followed by that resistance exercise results in increased flexion, extension and calf circumference.

Quality of life of CABG clients

Patricia Thomson, Catherine Niven A, David F, (2013); Manupreet Kaur, Ashok Kumar, (2013); Sandau KE, Savik K (2010) evaluated the quality of life before and 3 months after the CABG surgery, and the results revealed quality of life increased before the surgery and no difference in the lifestyle and after the CABG surgery. Quality of life is associated with Income, educational status and marital status and the life style is associated with gender, income and educational status. The study concluded that better

life style result in better quality of life. Teiwin et al (2013) studied the quality of outcome of men and women after 1 year of CABG surgery. Researcher concluded that both male and female had similar improvement in physical, social, emotional functioning and early recovery but women's health related quality of scale remain less favourable than men's throughout 1 year after study.

Balan A, Lee G (2013) assessed the need for recovery from post cardiac surgery after 6 weeks in basis of improvement in physical and mental quality of life,there was an improvement in physical function, general health perception and energy vitality but no improvement in the mental quality of life, patients experience high level of pain at 6 weeks of surgery. Oxalad M, Stubberfield J, Stuklis R, Edward (2011); Lee (2010) evaluated the physical and mental quality of life 5 year post CABG was analysed using the physical component score and mental component score result revealed that physical quality improved from 35% to 70% and mental component was 55% respectively.

Summary

After an extensive literature search the researcher found that majority of the staff nurses lack in knowledge and have negative attitude towards CABG discharge education. The reviews supported that discharge education will enhance the knowledge of nurses and promotes the quality of life among CABG clients. The reviews also supported that self instructional module is the effective method for imparting knowledge and attitude among nurses and the researcher had thought to use the self instructional module as a intervention tool to enhance the knowledge and attitude of nurses during the time of discharge of CABG patient.

CHAPTER-3

RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

Methodology of research organizes all the components of the study in a way that most likely will lead to valid answers for the problem that have been posted **(Burns and Groove, 2008).** This chapter deals with the methodology used to assess the effectiveness of Self instructional discharge protocol for Coronary Artery Bypass Graft (CABG) on knowledge and attitude among nurses at selected setting, Trivandrum.

This phase of study deals with research design, variables, setting of the study, population, sample, criteria for sample selection, sample size, sampling technique, development and description of the tool, content validity, reliability of the tool, pilot study, procedure for data collection, and procedure for data analysis.

3.1 RESEARCH APPROACH

A Quantitative research approach was used to achieve the aims and objectives of the study

3.2 RESEARCH DESIGN

The research design used for this study was pre-experimental one group pre test post test design. Based on **Polit, F. Denise., and Hunger, P. Bernadatte., (2011).**

Table 3.2.1: Schematic representation of pre experimental design

GROUP	Pre test (O_1) (Day – 1)	Intervention (×) (Same day)	Post test (O_2) (Day – 7)
Nurses	Assessing the level of knowledge and attitude among nurses regarding Self Instructional Discharge Protocol for CABG clients assessed by using structured knowledge questionnaire and 4 point Likert scale respectively	Booklet on Self Instructional Discharge Protocol for CABG clients consists of 1. Pain management 2. Wound care 3. Drug therapy 4. Life style modification(diet, exercise, sleep and stress alleviation) 5. Warning signs of complications 6. Follow up	Assessing the level of knowledge and attitude among nurses regarding self instructional discharge protocol for CABG clients assessed by using structured knowledge questionnaire and 4 point Likert scale respectively

3.3 VARIABLES

3.3.1 Independent variable

Self Instructional discharge protocol

3.3.2 Dependent variables

Knowledge and attitude of nurses

3.3.3 Extraneous variables

It consists of demographic variables such as age, gender, educational status, total years of experience, position held in the ward.

3.4 SETTING OF THE STUDY

The research setting was Nooral Islam Institute of Medical Science, Neyyattinkara. It is a 350 bed multi specialty hospital. An average of about 72 nurses are working in the selected departments, including Cardio Thoracic Intensive Care Unit with 15 beds, Post –Operative ward with 25 beds and all others - SS block, AG block, New pay ward, old pay ward with each 40 bed respectively. The number of CABG surgery per month is about 22 - 32. In Cardio Thoracic Intensive Care Unit – 7 staffs/ morning shift and 6 staffs/ evening and night shift; Post operative ward – 6 staff/ morning shift and 5 staffs/evening and night shifts; In wards 5 staffs/ morning shifts and 4 staffs/ evening and night shifts respectively.

3.5 POPULATION

3.5.1 Target population

All the registered nurses (qualified with Diploma in General Nursing and Midwifery, B.Sc nursing, Post Basic B.Sc nursing degree) who take care of CABG clients and participate in discharge procedure.

3.5.2 Accessible population

All registered nurses available during the data collection period and who involve in care of CABG clients and in their discharge, at Nooral Islam Institute of Medical Science hospital, Trivandrum.

3.6 SAMPLE

51 registered nurses who satisfied with the inclusion criteria

3.7. SAMPLE SIZE

51 staff nurses who were working in Cardio Thoracic Intensive Care Unit, Post-operative ward, SS block, AG block, Old pay ward, New pay wards of Nooral Islam Institute of Medical Science hospital, Trivandrum.

3.8. SAMPLING TECHNIQUE

Non probability purposive sampling technique

3.9 CRITERIA FOR SAMPLE SELECTION

3.9.1 Inclusion criteria

Registered nurses,

1 With educational qualification of Diploma nursing, B.Sc nursing, Post.B. B.sc nursing.
2 Who are available at the time of data collection.
3 Who involved in the care of post CABG clients.

3.9.2 Exclusion criteria

Registered nurses,

1 Who are not willing to participate in the study
2 Who already had an exposure to similar type of discharge protocol
3 With less than 6 months experience in the selected unit

3.10. DEVELOPMENT AND DESCRIPTION OF THE TOOL

After an extensive review of literature, discussion with research guide and experts with the investigator's personal and professional experience, a structured knowledge questionnaire was used to assess the level of knowledge and 4 point Likert scale used to assess the level of attitude regarding self instructional discharge protocol for CABG clients.

The tool constructed for the study consists of 2 parts

PART A: ASSESSMENT TOOLS

PART B: INTERVENTION TOOL

PART A: Data collection tool: This consisted of 3 sections

Section A: Assessment of Demographic Variables

Section B: Structured Knowledge Questionnaire

Section C: 4 point Likert scale

PART B: INTERVENTION TOOL

Section D: Self Instructional Discharge Protocol for CABG clients

PART A: DATA COLLECTION TOOL

3.10.1 Section A: Assessment of Demographic Variables

Personal data sheet was used to collect the demographic characteristics, to assess the background of the nurses. This includes age in years, gender, educational status, years of experience, position held in the ward.

3.10.2 SECTION B: Structured Knowledge Questionnaire

A structured knowledge questionnaire consists of 25 questions which was developed by the researcher to assess the level of knowledge among nurses on self instructional discharge protocol for CABG clients with following components.

Components	No. of Questions
Pain management	3
Wound care and hygiene	4
Drug therapy	4
Life style modification(diet, exercise, sleep and stress alleviation)	8
Warning signs of complications	3
Follow up	3

SCORING AND INTERPRETATION

The questionnaire consists of 25 multiple choice questions with 4 options of single correct answer.

Scoring key: The items were rated as correct answer as "1" mark and the wrong answer as "0".

Total item score: Maximum score was '25' and Minimum score was '0'. The raw score obtained was converted into percentage to interpret the level of knowledge. The level of knowledge was interpreted as

SCORE	PERCENTAGE	INTERPRETATION
≥19	>75%	Adequate knowledge
13-18	51-75%	Moderately adequate knowledge
≤ 12	≤50%	Need to improve

3.10.3 SECTION C: 4 Point Likert scale

The level of attitude regarding self instructional discharge protocol for CABG clients was assessed using 4 point Likert scale prepared by the investigator.

Scoring key: The item consists of 10 statements 5 (+) and 5 (-) rated on a scale from 1-4. Positively worded statements are scored as follows:

TYPE OF RESPONSE	POSITIVE STATEMENTS	NEGATIVE STATEMENTS
Strongly agree	4	1
Agree	3	2
Disagree	2	3
Strongly disagree	1	4

Interpretation:

SCORE	PERCENTAGE	CATEGORY
≤ 20	≤ 50%	Unfavorable attitude
21-29	51-75%	Moderately favorable
≥ 30	>75%	Favorable

3.10.4 PART B: INTERVENTION PROTOCOL

Section D: Self Instructional Discharge Protocol

PRELIMINARY PREPRATION:

The investigator collected the sources from various books, journals and guidance from medical expert regarding discharge advices for CABG clients. Booklet on self instructional discharge protocol for CABG clients is given to all the samples to improve their knowledge and attitude. It comprises of discharge instruction which includes

- Pain management
- Wound care and hygiene
- Drug therapy
- Life style modification(diet, exercise, sleep, stress alleviation)
- Warning signs of complications
- Follow up

The investigator obtained formal permission from the nursing superintendent and ward in- charges and met each nurses (evening and night shift) in all the selected units includes Cardio Thoracic Intensive Care Unit, Post Operative ward, SS block, AG block, New pay ward and Old pay ward respectively and obtained informed consent to participate in the study, any previous exposure to similar discharge protocol are clarified with the nurses.

DURING THE INTERVENTION:

DAY 1: The investigator met each nurses and self-introduced, conducted the pre test and the nurses took 30 minutes to answer all questions and explained about the benefits of the self instructional discharge protocol for CABG clients and the duration of

activity is about 15 minutes to a group of maximum 15 nurses. The investigator issued the booklet to each nurses and instructed to go through the content, In case of any queries the nurses were enforced to contact the investigator at any time.

DAY 7: The investigator gathered all the nurses at well ventilated room with adequate comfort and conducted post test and enforced on discharge protocol for CABG clients to follow in hospital setup during the time of patient discharge.

AFTER INTERVENTION:

The investigator thanked the nursing superintendent, ward in- charges and all nurses who participated in the study, asked about the feedback of the study and once again enforced the nurses to follow during the time of patient discharge.

3.11 CONTENT VALIDITY

The content validity of the data collection tool and intervention protocol was ascertained from following field of expertise;

Cardio thoracic surgeon – 3

Nursing expert – 3

All the experts had their consensus and their suggestions were incorporated then the tool was finalized.

3.12 ETHICAL CONSIDERATION

Ethics is a system of moral values concerned with the degree to which the research procedures adhere to the professional, legal and social obligations to the study participants. **Polit and Hungler (2011)**

The ethical principles followed in the study were:

A. BENEFICENCE

The investigator followed the fundamental ethical principle of beneficence (doing good) by adhering to

a. **Freedom from harm & discomfort**

The study was beneficial for the participants as it enhanced their knowledge about self instructional discharge protocol and developed the positive attitude regarding care of clients with CABG.

b. **Protection from exploitation**

The investigator completely explained the procedure and nature of the study to the nurses and ensured that none of the participants would be exploited at any cost or denied from fair treatment.

B. RESPECT FOR HUMAN DIGNITY

The investigator followed the second ethical principle of respect for human dignity. It includes the right to self-determination and the right to self -disclosure.

a. The Right to Self-determination

The investigator gave full freedom to the participants (nurses) to decide voluntarily to participate in the study or to withdraw from the study and the right to ask questions at any time during the course of study.

b. The Right to Full Disclosure

The investigator has fully explained the nature of the study, the person's right to refuse or participation in the study and the researcher's responsibilities based on which both the oral and written informed consent was obtained from the participants (nurses).

C. JUSTICE

The researcher adhered to the third ethical principle of justice, it includes participant's right to fair treatment and right to privacy.

a. **Right to Fair Treatment**

The researcher selected the study participants based on the inclusion and exclusion criteria.

b. **Right to Privacy**

The researcher maintained the participant's privacy through confidentiality pledge and informed consent throughout the study.

D. CONFIDENTIALITY

The researcher maintained confidentiality of the data provided by the study participants (nurses) through individual coding for each participant's.

3.13 RELIABILITY

The reliability of the tool was established by test - retest method to assess knowledge and split half method to assess the attitude regarding self instructional discharge protocol. The 'r' value for knowledge and attitude was 0.92 and 0.88 respectively. The r value indicated high reliability which showed that the tool was found to be reliable, feasible and practicable to conduct the main study.

3.14 PILOT STUDY PROCEDURE

Pilot study is the trial run for the main study. Pilot study was conducted at Dr. Kamakshi Memorial hospital, Velachery, after obtaining ethical clearance from International Centre for Collaborative Research (ICCR). A formal written permission was sought from the Principal, Omayal Achi College of Nursing, Mr. Sunil, Academic officer followed by chief cardiologist Dr. Thirumalai, and the Managing director Dr. Raj Kumar and Nursing superintendent of Dr. Kamakshi Memorial hospital for conducting pilot study. The study was conducted for a period of one week from 21st May to 27th May 2015.

The investigator selected 7 samples who fulfilled the inclusion criteria using non-probability purposive sampling technique, from I and II floor cardiac ward. The investigator introduced self to the nurses and gave a brief explanation regarding the purpose of the study and written consent was obtained from the nurses.

On 21.05.2015 the samples were gathered and seated comfortably in a well ventilated room. Demographic details were obtained using a structured demographic profile. Then the investigator assessed the pre test level of knowledge using structured knowledge questionnaire and attitude using 4 point Likert scale prepared by the investigator regarding self instructional discharge protocol for CABG client, followed by that self instructional discharge protocol booklet which was prepared by the investigator was given to the nurses and instructed them to read and get understand with the content.

Doubts were clarified by discussion. The post test was conducted at the 7th day by using the same questionnaire.

The result of the pilot study reveals that the data collection tool and the self instructional discharge protocol for CABG clients was considered to be highly feasible and practicable to conduct the main study.

3.15 PROCEDURE FOR DATA COLLECTION

The main study was conducted after obtaining formal permission from the Principal, Omayal Achi College of Nursing. Ethical committee clearance was obtained from the International Centre for Collaborative Research (ICCR) and written permission was obtained from Medical Director and Nursing Superintendent of Nooral Islam Institute of Medical Science hospital, Trivandrum.

The study was conducted for a period of 4 weeks in NIIMS hospital. Formal permission was obtained from the nursing superintendent and ward in-charges. A total of 51 staff nurses who satisfied the inclusion criteria were selected using non probability purposive sampling technique. Totally 6 blocks were available in the selected hospital are Cardio Thoracic Intensive Care Unit, Post Operative ward, SS block, AG block, New pay ward and Old pay ward. Each block is separate and no communication between the blocks. The researcher selected night duty and evening duty nurses in each block for the research study. A brief self introduction and detailed explanation regarding the purpose of the study was given. Written informed consent was obtained from nurses and confidentiality was reassured. The researcher selected the nurses based on the selection criteria and data collection was commenced. At first the demographic data was collected using personal data sheets and pre test knowledge was assessed using structured knowledge questionnaire and attitude using 4 point Likert scale. It took approximately 30 minutes for each nurse's to answer them followed by the pre test the investigator given a brief description about the intervention and Self Instructional discharge protocol booklet was given. The investigator asked the nurses to go through with the content and clarify the doubt by discussion with the investigator.

On the 7th day the researcher conducted a post test by using the same structured knowledge questionnaire to assess the level of knowledge and modified 4 point Likert scale to assess the level of attitude. All ethical principles were adhered throughout the course of the study

3.16 PLAN FOR DATA ANALYSIS

The data obtained was analyzed by using both descriptive and inferential statistics.

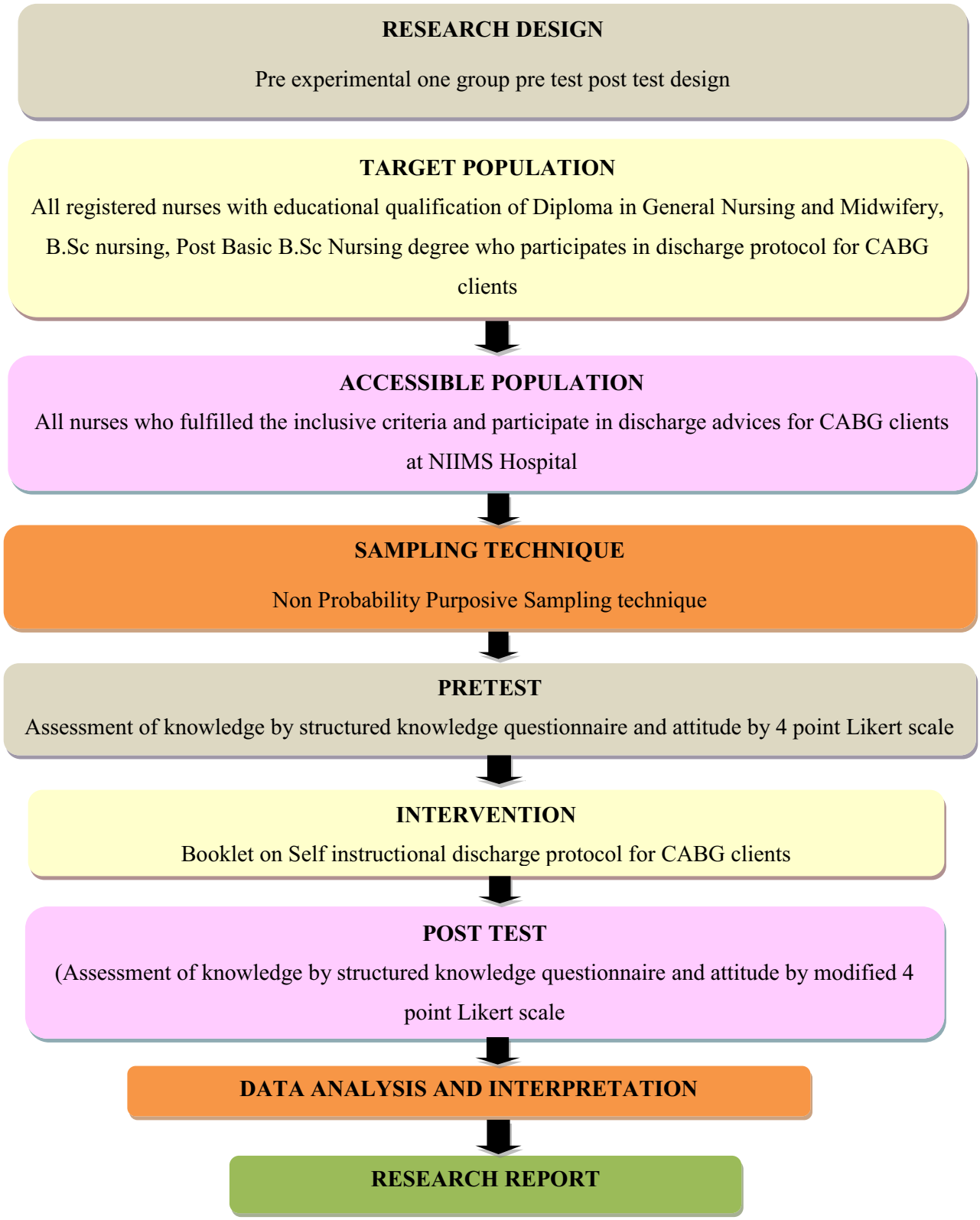
3.16.1 Descriptive Statistics

1. Frequency and percentage distribution was used to analyze the selected demographic variables.
2. Mean and Standard Deviation was used to assess the level of knowledge and attitude among nurses.

3.16.2 Inferential Statistics

1. Paired 't' test was used to assess the effectiveness of self instructional discharge protocol for CABG clients.
2. Correlation coefficient was utilized to find the relationship between pre and post level of knowledge score with attitude score regarding self instructional discharge protocol for CABG clients.
3. One way ANOVA was used to associate the selected demographic variables with the mean differed level of knowledge and attitude regarding self instructional discharge protocol for CABG clients.

SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

DATA ANALYSIS AND INTERPRETATION

The analysis is a process of organizing and synthesizing the data in such a way that the research question can be answered and hypothesis are tested (Polit and Hunger, 2011)

This chapter deals with analysis and interpretation of data to study the effectiveness of self instructional discharge protocol for CABG clients. The data collected was organized, tabulated and analyzed according to the objectives. The findings based on the descriptive and inferential statistical analysis were presented under the following sections.

ORGANIZATION OF THE DATA

Section 4.1: Description of the demographic variables of nurses.

Section 4.2: Assessment of pre test and post test level of knowledge and attitude regarding self instructional discharge protocol for CABG clients among nurses.

Section 4.3: Effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude among nurses.

Section 4.4: Correlation of post test knowledge score with attitude score regarding self instructional discharge protocol for CABG clients among nurses.

Section 4.5: Association of selected demographic variables with their mean differed score of knowledge and attitude regarding self instructional discharge protocol for CABG clients among nurses.

SECTION 4.1: DESCRIPTION OF THE DEMOGRAPHIC VARIABLES OF NURSES.

Table 4.1.1: Frequency and percentage distribution of demographic variables are age, gender and educational status regarding self instructional discharge protocol for CABG clients among nurses

N = 51

S. No.	Demographic Variables	No.	%
1.	**Age in years**		
	21 - 25	37	72.55
	26 - 30	10	19.61
	31 - 35	3	5.88
	≥36	1	1.96
2.	**Gender**		
	Male	6	11.76
	Female	45	88.24
3.	**Educational status**		
	GNM	16	31.37
	B.Sc. Nursing	35	68.63
	P.B.B.Sc. Nursing	0	0.00
	M.Sc. Nursing	0	0.00

Most of the nurses were females in the age group of 21 – 25 years and had an educational qualification of B.Sc. Nursing.

Table 4.1.2: Frequency and percentage distribution of demographic variables are total year of experience, position held in the ward and previous exposure regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

S. No.	Demographic Variables	No.	%
1.	**Total years of experience**		
	6 months - 1 yr	14	27.45
	2 – 3	18	35.29
	4 - 6	16	31.37
	> 6	3	5.88
2.	**Position held in the ward**		
	Staff nurse	43	84.31
	Senior nurse	5	9.80
	Ward-in-charge	3	5.88

Most of the nurses were holding the designation of staff nurses with 2 – 3 years of experience.

SECTION 4.2: ASSESSMENT OF PRETEST AND POST TEST LEVEL OF KNOWLEDGE AND ATTITUDE REGARDING SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CABG CLIENTS AMONG NURSES.

Table 4.2.1: Frequency and percentage distribution of pretest level of knowledge regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

Knowledge Aspects	Inadequate (≤50%)		Moderate (51 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Pain management	11	21.57	37	72.55	3	5.88
Wound care and hygiene	15	29.41	24	47.06	12	23.53
Drug therapy	6	11.76	30	58.82	15	29.41
Lifestyle modification	22	43.14	26	50.98	3	5.88
Warning signs of Complications	13	25.49	21	41.18	17	33.33
Follow-up	4	7.84	41	80.39	6	11.76
Overall	**0**	**0**	**43**	**84.31**	**8**	**15.69**

In the pre test majority of the nurses had moderately adequate knowledge on self instructional discharge protocol regarding pain management, drug therapy, lifestyle modifications and follow up.

The overall pretest knowledge revealed that majority of the nurses had moderately adequate knowledge and few nurses had adequate knowledge.

Table 4.2.2: Frequency and percentage distribution of post test level of knowledge regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

Knowledge Aspects	Inadequate (≤50%)		Moderate (51 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Pain management	0	0	4	7.84	47	92.16
Wound care and hygiene	0	0	11	21.57	40	78.43
Drug therapy	2	3.92	8	15.69	41	80.39
Lifestyle modification	0	0	29	56.86	22	43.14
Warning signs and Complications	1	1.96	5	9.80	45	88.24
Follow-up	1	1.96	4	7.84	46	90.20
Overall	**0**	**0**	**0**	**0**	**51**	**100.0**

In the post test most of the nurses had adequate knowledge regarding pain management, wound care and hygiene, drug therapy, lifestyle modification, warning signs of complications and follow up.

The overall post test level of knowledge revealed that almost all the nurses had adequate knowledge.

Section 4.2: Assessment of pretest and post test level of knowledge regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

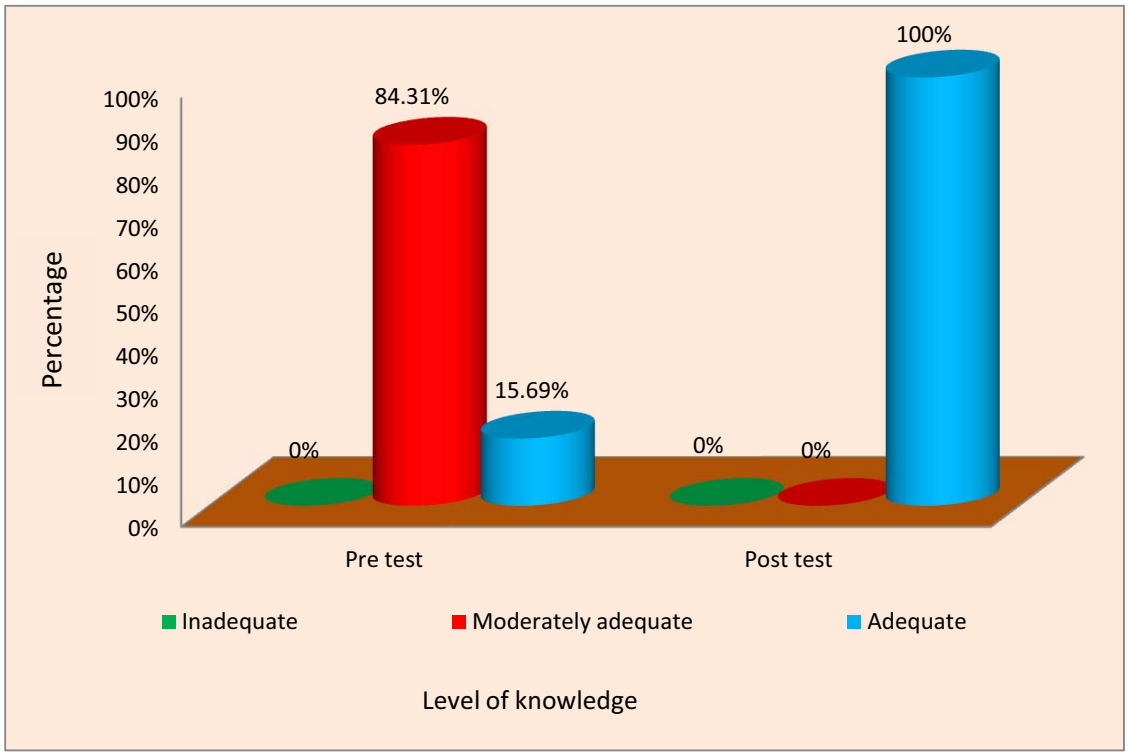


Fig.4.2.3: Frequency and percentage distribution of pre and post test level of knowledge regarding self instructional discharge protocol for CABG clients among nurses

Figure 4.2.3 reveals that in the pre test most of the nurses had moderately adequate knowledge and few nurses had adequate knowledge whereas after administration of self instructional discharge protocol the post test score revealed that almost all the nurses had adequate knowledge.

Hence, it is proved that the administration of discharge education protocol has enhanced the level of knowledge among nurses. Previous research evidences reported that proper discharge teaching by the nurse will improve the quality of life of clients.

Section 4.2: Assessment of pretest and post test level of attitude regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

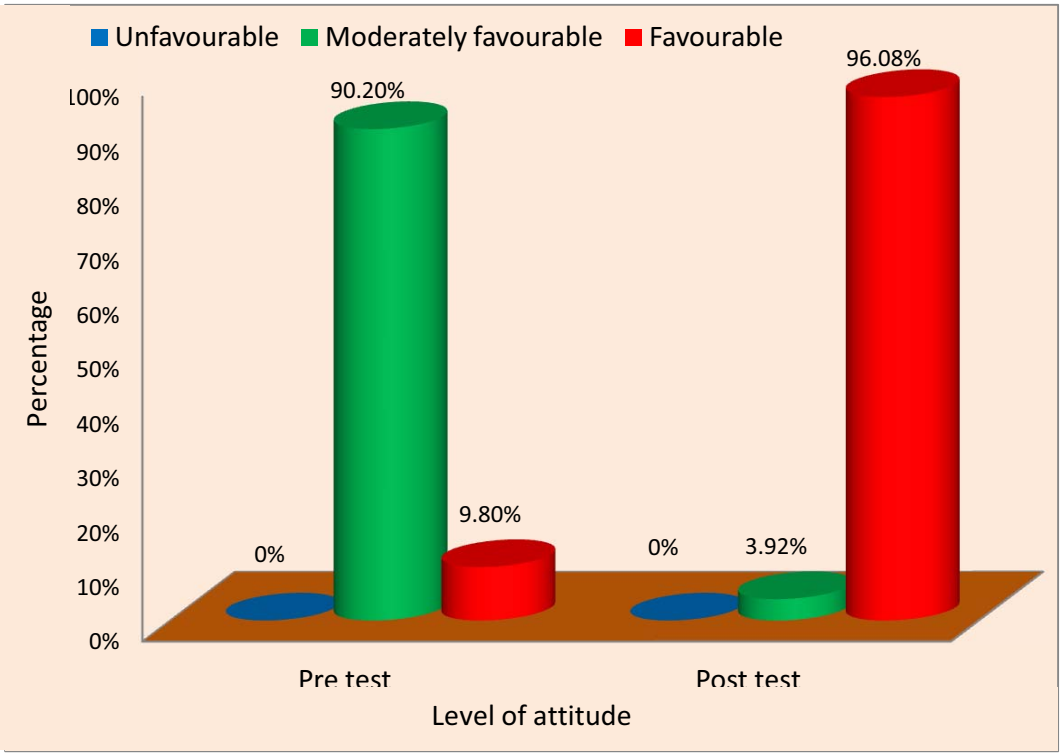


Figure 4.2.4 Frequency and percentage distribution of pre and post test level of attitude regarding self discharge protocol for CABG clients among staff nurses.

Figure 4.2.4 depicts that in pretest most of nurses 90.20% had moderately favourable attitude and few nurses 9.80% had favourable attitude and after administration of self instructional discharge protocol the researcher found that in the post test 96.08% nurses had favourable attitude and few nurses 3.92% had moderately favourable attitude towards self instructional discharge protocol for CABG clients.

This shows that after administration of intervention the nurses developed positive attitude towards self instructional discharge protocol for CABG clients.

SECTION 4.3: EFFECTIVENESS OF SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CABG CLIENTS ON KNOWLEDGE AND ATTITUDE AMONG NURSES.

Table 4.3.1: Comparison of pretest and post test level of knowledge regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

Knowledge	Mean	S.D	Paired 't' Value
Pre Test	16.33	1.95	t = 19.295
Post Test	22.54	1.39	p = 0.000, S ***

***p<0.001, S – Significant

The calculated paired "t" value was 19.295 was found to have high statistical significance at p< 0.001 level. This clearly indicates that administration of self instructional discharge protocol for CABG clients had significant improvement in the level of knowledge among nurses. This shows the effectiveness of intervention protocol.

Table 4.3.2: Comparison of pretest and post test level of attitude regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

Attitude	Mean	S.D	Paired 't' Value
Pre Test	27.60	2.31	t = 15.042 p = 0.000, S***
Post Test	34.09	2.28	

***p<0.001, S – Significant

The calculated paired "t" value was t = 15.042 was found to have high statistical significance at p< 0.001 level. This clearly indicates that administration of self instructional discharge protocol for CABG clients had significant improvement in the level of attitude among nurses at post test. This shows the effectiveness of intervention protocol.

SECTION 4.4: CORELATION BETWEEN POST TEST KNOWLEDGE WITH ATTITUDE SCORE REGARDING SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CABG CLIENTS AMONG NURSES.

Table 4.4.1: Correlation between post test level of knowledge with attitude regarding self instructional discharge protocol for CABG clients among nurses.

N = 51

Variables	Mean	S.D	'r' Value
Knowledge	22.54	1.39	r = 0.317
Attitude	34.09	2.28	p = 0.024, S*

*p<0.05, S –Significant

While correlating the post test level of knowledge with attitude the Karl Pearsons's r value r = 0.317 had shown positive correlation. It proves that self instructional discharge protocol administered by the investigator showed significant improved the knowledge of nurses. When knowledge increases attitude also increases.

SECTION 4.5: ASSOCIATION OF SELECTED DEMOGRAPHIC VARIABLES WITH THEIR MEAN DIFFERED SCORE OF KNOWLEDGE AND ATTITUDE REGARDING SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CABG CLIENTS AMONG NURSES.

Table 4.5.1: Association of mean differed knowledge score regarding self instructional discharge protocol for CABG clients among nurses with their selected demographic variables. **N = 51**

Demographic Variables	Pretest		Post Test		Mean Imp.		ANOVA
	Mean	S.D	Mean	S.D	Mean	S.D	
Age in years							
21 - 25 yrs	16.48	2.06	22.24	1.40	5.75	2.13	F = 2.329
26 - 30 yrs	16.40	1.50	23.50	1.17	7.10	2.60	p = 0.086
31 - 35 yrs	14.33	1.52	23.00	0.00	8.67	1.52	N.S
≥36 yrs	16.00	-	23.00	-	7.00	-	
Gender							t = 1.451
Male	15/83	1.47	21.33	0.81	5.50	1.04	p = 0.169
Female	16.40	2.01	22.71	1.37	6.31	2.41	N.S
Educational status							
GNM	15.75	2.08	22.81	1.68	7.06	2.90	t = 1.554
B.Sc. Nursing	16.60	1.86	22.42	1.24	5.82	1.88	p = 0.135
P.B.B.Sc. Nursing	-	-	-	-	-	-	N.S
M.Sc. Nursing	-	-	-	-	-	-	
Total years of experience (in years)							
6 months - 1 yr	15.14	1.23	22.07	1.32	6.92	1.85	F = 1.476
2 - 3 yrs	16.94	2.04	22.44	1.46	5.50	2.47	p = 0.233
4 - 6 yrs	16.87	2.06	23.00	1.41	6.12	2.44	N.S
> 6 yrs	15.33	1.15	23.00	0.00	7.67	1.15	
Position held in the ward							F = 4.150
Staff nurse	16.35	1.93	22.46	1.27	6.11	1.94	p = 0.022
Senior nurse	15.20	1.09	23.60	1.94	8.40	2.70	S*
Ward-in-charge	18.00	2.64	22.00	1.73	4.00	4.35	

*p<0.05, S – Significant, N.S – Not Significant

The demographic variables such as position held in the ward had shown mild statistical significant association with mean differed knowledge score among nurses regarding self instructional discharge protocol for CABG clients.

N = 51

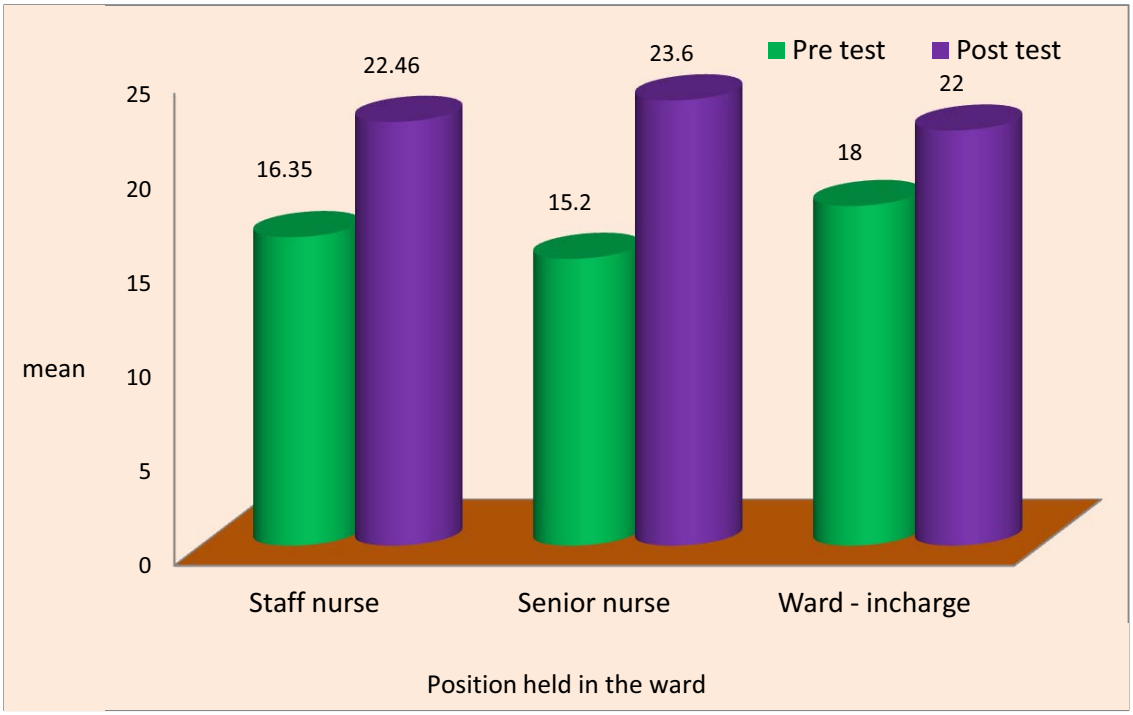


Fig.4.3.1: Association of demographic variables with their pre and post mean differed score of knowledge regarding self instructional discharge protocol for CABG clients among nurses.

The above figure 4.3.1 shows that position held in the ward had significant association with pre and post mean differed score of knowledge regarding self instructional discharge protocol for CABG clients among nurses.

Table 4.5.2: Association of mean differed attitude score regarding self instructional discharge protocol for CABG clients among nurses with their selected demographic variables.

N = 51

Demographic Variables	Pretest		Post Test		Mean Imp.		ANOVA
	Mean	S.D	Mean	S.D	Mean	S.D	
Age in years							
21 - 25 yrs	27.45	2.38	33.83	1.75	6.37	2.74	F = 2.053
26 - 30 yrs	28.10	2.28	34.80	1.98	6.70	2.54	p = 0.119
31 - 35 yrs	27.00	1.73	32.33	3.78	5.33	2.08	N.S
>36 yrs	30.00	-	30.00	-	0.00	-	
Gender							F = -0.203
Male	27.00	3.16	33.00	1.54	6.00	3.34	p = 0.846
Female	27.68	2.21	33.97	2.07	6.28	2.71	N.S
Educational status							
GNM	26.93	2.17	33.00	2.30	6.06	2.54	F = -0.350
B.Sc. Nursing	27.91	2.34	34.25	1.78	6.34	2.88	p = 0.729
P.B.B.Sc. Nursing	-	-	-	-	-	-	N.S
M.Sc. Nursing	-	-	-	-	-	-	
Total years of experience (in years)							F = 1.676
6 months - 1	27.42	2.17	33.64	1.69	6.21	2.35	p = 0.185
1 - 3	27.55	2.57	33.88	2.08	6.33	2.99	N.S
3 - 6	27.81	2.31	34.62	1.54	6.81	2.61	
>6	27.66	2.51	30.66	3.05	3.00	3.00	
Position held in the ward							F = 4.043
Staff nurse	27.67	2.25	33.76	1.84	6.09	2.57	p = 0.024
Senior nurse	26.40	2.88	34.00	2.23	7.60	2.70	S*
Ward-in-charge	28.66	2.30	35.00	4.35	6.33	5.68	

*p<0.05, S – Significant, N.S – Not Significant

The demographic variables position held in the ward had shown mild statistical significant association with mean differed attitude score among nurses regarding self instructional discharge protocol for CABG clients.

N = 51

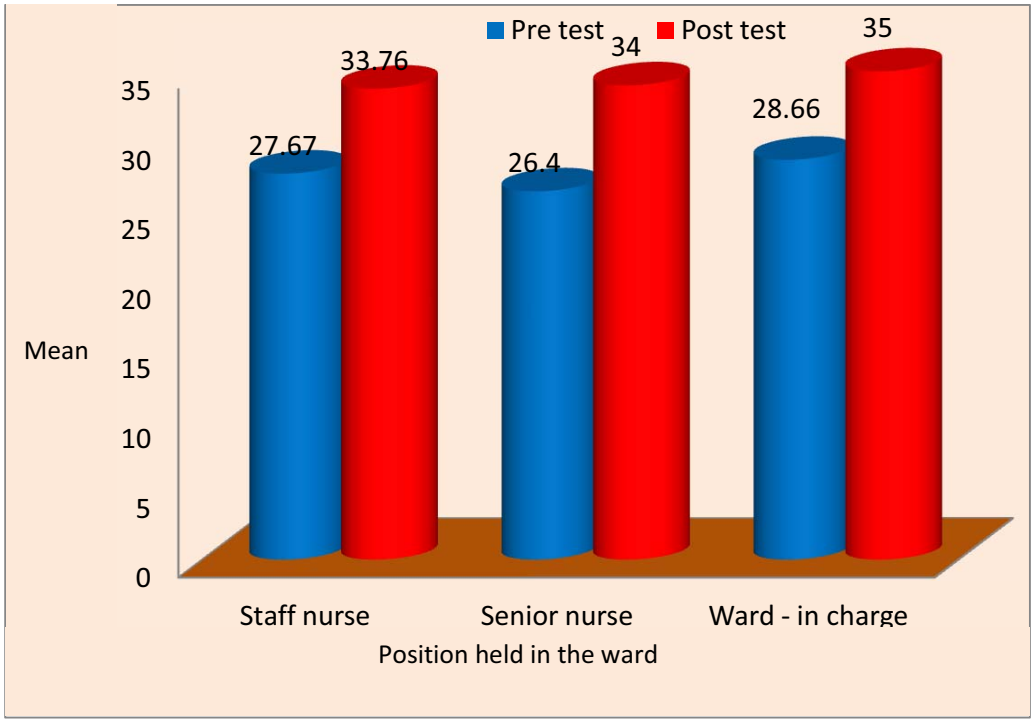


Fig.4.3.2: Association of demographic variables with their pre and post mean differed score of attitude regarding self instructional discharge protocol for CABG clients among nurses.

The above figure 4.3.2 shows that position held in the ward had significant association with pre and post mean differed score of attitude regarding self instructional discharge protocol for CABG clients among nurses.

CHAPTER-5

DISCUSSION

DISCUSSION

This chapter discusses in detail about the finding of the analysis in relation to the objectives of the study. The following were the objectives of the study and further discussion will exemplify how these objectives were satisfied by the study.

5.1The findings of the demographic variables of staff nurses

The demographic variables of the nurses considered in the study was age in years, gender, educational status, total years of experience, position held in the ward and any previous exposure to discharge protocol.

Most of the nurses were females come under the age group of 21 – 25 years had an educational qualification of B.Sc. Nursing holding a designation of staff nurses with the experience of 2 – 3 years with no previous exposure to IEC or CABG discharge protocols.

5.2 The first objectives was to assess the pre and post test level of knowledge and attitude regarding self instructional discharge protocol for CABG clients among staff nurses.

In the pre test most of the nurses had moderately adequate knowledge on self instructional discharge protocol regarding pain management, drug therapy, lifestyle modifications and follow up. The overall pretest knowledge revealed that most of the nurses had moderately adequate knowledge and few nurses had adequate knowledge.

In the post test most of the nurses had adequate knowledge regarding pain management, wound care and hygiene, drug therapy, lifestyle modification, warning signs of complications and follow up. The overall post test level of knowledge revealed that almost all the staff nurses had adequate knowledge.

The administration of self instructional discharge protocol has enhanced the post test level of knowledge of nurses. This is a well proven fact that previous research evidences that proper teaching program enhances the knowledge among staff nurses.

In pretest most of nurses 90.20% had moderately favourable attitude and few nurses 9.80% had favourable attitude and after administration of self instructional discharge protocol the researcher found that in the post test 96.08% nurses had favourable attitude and few nurses 3.92% had moderately favourable attitude towards self instructional discharge protocol for CABG clients.

This shows that after administration of intervention the nurses developed positive attitude towards self instructional discharge protocol for CABG clients.

The above findings were consistent with the prospective study conducted by **Ozcan, Yildiz Findik, et al., (2010)** to find out the information level regarding discharge training provided by nurses following open heart surgery at University Training and Research Hospital, Nursing department, Turkey. Pretest and post test level of knowledge was assessed using a structured questionnaire. The study findings reveals that discharge education provided by the nurses improved the knowledge and created a positive impact towards the CABG discharge education at $p<0.05$ level among open heart surgery clients.

Hence the Null Hypothesis(NH_1) stated earlier that "There is no significant difference in the pre and post test level of knowledge and attitude on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ was rejected".

5.3 The second objectives was to determine the effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude among nurses

Comparison of pre and post test level of knowledge and attitude regarding self instructional discharge protocol for CABG clients, the calculated paired "t" test value was 19.295 was found to have high statistical significance at $p< 0.001$ level.

Comparison of pre and post test level of attitude regarding self instructional discharge protocol for CABG clients, the calculated paired "t" test value was 17.567 was found to have high statistical significance at $p< 0.001$ level.

This clearly indicates that administration of self instructional discharge protocol for CABG clients had significant improvement in the level of knowledge and attitude among nurses at post test. This shows the effectiveness of intervention protocol.

The investigator has adopted integrated concepts of Hildegard E Paplau's interpersonal relationships model and Robert R Carkhuff's Helping and Human Relationships theory to conceptualize the research study.

In Orientation phase, Identification phase and Human Relationships, in which the helper (investigator) have identified the felt need of helpee (nurses). The investigator has done the pre test assessment of existing level of knowledge of nurses by utilizing the structured knowledge questionnaire.

In exploitation phase and helping process, informal teaching to introduce the concepts of discharge protocol and the administration of booklet on discharge protocol for CABG clients by the investigator to the nurses.

In Resolution phase and New behavior, the post test assessment is done by structured questionnaire and 4 point Likert scale respectively. The new behaviour indicated by positive outcome is the attainment of adequate knowledge and favourable attitude, moderately adequate knowledge and moderately favourable attitude regarding discharge protocol for CABG clients which may be enhanced.

The findings were consistent with a quasi-experimental study conducted by **Fatma Cebeci., Sevilay Senol Celik (2012)** to evaluate the effectiveness of discharge teaching given by nurses to the 109 patients undergoing coronary artery bypass graft surgery (experimental group-57 and control group-52) in Department of surgical nursing at Hacettepe university, Faculty of health sciences, Ankara. Patients in the intervention group were given planned discharge teaching and counseling by the nurse researcher while the control group received only the routine clinical procedures. The study findings revealed that the mean anxiety and depression scores of the patients in the intervention group were lower than in the control group at the time of discharge and one week and one month after discharge. The study concluded that discharge services had given a positive impact on alleviating the level of anxiety and depression.

5.4 The third objective was to correlate the post test knowledge with the attitude score regarding self instructional discharge protocol for CABG clients among nurses.

Correlation of the post test level of knowledge with attitude score regarding self instructional discharge protocol for CABG clients, the Karl Pearson correlation coefficient with "r" value of 0.238 reveals that there was a moderate positive correlation between knowledge and attitude of nurses. It proves that self instructional discharge protocol administered by the investigator showed significant improved the knowledge of nurses. When knowledge increases their level of attitude also increases.

The findings were consistent with the study conducted by **Zevola, Maier et al., (2011)** at Cardio Thoracic Medical Centre in USA on caring of bypass surgery patients, quality of education towards patient discharge provided by health care team among 28 nurses. Followed by the pretest questionnaire, the nurses were exposed to In- service education training and demonstration in caring of open heart surgery patients. The education training improved the level of knowledge of health care provider significantly at $p<0.01$ and created a positive attitude and improved skill in providing care was analysed using the quality of medical report maintained by the nurses.

The Null Hypothesis (NH_2) stated earlier that "There is no significant relationship between the post test level of knowledge and attitude of nurses regarding self instructional discharge protocol for CABG clients at $p<0.05$ level was rejected".

5.5 The fourth objectives was to associate the selected demographic variables with their mean differed score of knowledge and attitude regarding self instructional discharge protocol for CABG clients among nurses.

The selected demographic variables such as position held in the ward had shown mild statistical significant association with the mean differed level of knowledge score among nurses regarding self instructional discharge protocol for CABG clients and none of the demographic variables had shown statistical significant association with mean differed level of attitude score among nurses regarding self instructional discharge protocol for CABG clients.

Hence the Null Hypothesis (NH_3) stated earlier that "There is no significant association of selected demographic variables with the mean differed level of knowledge and attitude of nurses regarding self instructional discharge protocol for CABG clients, at $p<0.05$" was rejected for position held in the ward with the mean differed level of knowledge and accepted for all other demographic variables with the mean differed level of knowledge and attitude.

CHAPTER-6

SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATIONS & LIMITATIONS

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

This chapter puts forward the summary, conclusion, implications, recommendations and limitations.

6.1 SUMMARY

The most common cardiovascular problem is coronary artery disease secondary to atherosclerosis, is the second leading cause of death among all cardiovascular diseases. When the occlusion occur in "three blood vessel" the person need surgical procedures like coronary artery bypass graft (CABG) which is integral to the treatment of CVD. Although these surgical procedures often improve survival rates, decrease symptoms and increases an individual's functional ability, surgery is not curative and individuals with chronic CVD remains at increased risk for coronary events. To reduce the complications and further re-admission the individuals must develop the knowledge and skills for self-management at home to prolong their survival, improve their quality of life and reduce the need for additional interventions. So the nurses play a key role in educating the patients and their families and prepare them mentally and physically to effectively self-manage post-surgical symptoms once they are discharged to home. So the investigator being specialized in the medical surgical nursing conducted a study regarding CABG discharge education among nurses in view of helping the patients and caregivers to cope up with acute and chronic health issues than offering the same education at other times.

The objectives of the study were:

1. To assess the pre and post test level of knowledge and attitude regarding self instructional discharge protocol for CABG clients among nurses.
2. To determine the effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude among nurses.
3. To correlate the post test level of knowledge score with attitude score regarding self instructional discharge protocol for CABG clients among nurses.

4. To associate the selected demographic variables with their mean differed level of knowledge and attitude score regarding self instructional discharge protocol for CABG clients among nurses.

The study was based on the assumption that

1. Nurses may have some knowledge and attitude on self instructional discharge protocol for CABG clients.
2. Providing self instructional protocol may enhance the level of knowledge and attitude of nurses in preparing CABG clients for discharge.
3. Providing self instructional discharge protocol may prevent the complications among the clients who have undergone CABG.

The null hypothesis stated that:

NH_1: There is no significant difference in the pre and post test level of knowledge and attitude on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ level.

NH_2: There is no significant relationship between the post test level of knowledge score with attitude score on self instructional discharge protocol for CABG clients among nurses at $p<0.05$ level.

NH_3: There is no significant association of the selected demographic variables with their mean differed level of knowledge and attitude score on self instructional discharge protocol for CABG clients among nurses, at $p<0.05$ level.

The review of literature, professional experience and expert's guidance from the field of medical and surgical nursing provided a strong foundation for the study. It also strengthened the ideas for conceptual framework, aided to design the methodology and develop the tool for the data collection.

In view of explaining and relating various aspect of the study the investigator had adopted and integrated a framework based on Hildegard Peplau's Interpersonal relationship and Roberk R. Carkuff's Helping and human relationship theory.

The researcher adopted a Pre experimental one group pre test post test research design to assess the effectiveness of self instructional discharge protocol for CABG

clients on knowledge and attitude among nurses. 51 nurses were selected using Non probability purposive sampling technique.

The tool for data collection had following sections.

Section A- Personal data sheet to collect information on 6 demographic variables and clinical data. It consists of demographic variables such as age, gender, educational status, total year of experience in dealing with CABG clients, position held in the ward, previous exposure to similar CABG protocol to assess the background of the nurses.

Section B- Structured knowledge questionnaire to assess level of knowledge among nurses regarding discharge protocol for CABG clients consisting of 25 questions.

Section C- Modified 4 point likert scale prepared by the investigator to assess the level of attitude among nurses regarding discharge protocol for CABG clients consists of 10 items positively and negatively worded from 0-4.

The intervention protocol: Booklet regarding self instructional discharge protocol for CABG clients including information on Pain management, Wound care, Life style modification (diet, sleep, exercise, stress alleviation), Warning signs of complications, Follow up after discharge from the hospital.

The tool was validated by Medical Surgical Nursing experts. The reliability of the tool was established by test retest method for structured knowledge questionnaire and split half method for 4 point likert scale. The feasibility and practibality of the study was analysed by conducting a pilot study was at Dr. Kamakshi memorial hospital, Velachery, Chennai and found that the tool was practicable to proceed with the main study.

Throughout the research study the ethical aspect was maintained by obtaining the ethical clearance certificate from the International Centre for Collaborative Research (ICCR) and from the Medical Directors, Cardio Thoracic surgeon, Nursing Supervisor of NIIMS Hospital, Trivandrum.

The study was conducted for a period of 4 weeks. A brief introduction of self and purpose of the study was explained to nurses and informed consent was obtained to

proceed with the study. After obtaining written consent from the nurses, data collection was commenced. At first the demographic detail was elicited using personal data sheet then the investigator selected 51 samples who fulfilled the inclusion criteria, using non probability purposive sampling technique from CT ICU, Post operative, SS and AG block, New pay ward and Old pay ward of Nooral Islam Institute of Medical Science, Trivandrum.

The nurses were gathered in a conference hall, which was well ventilated and had comfortable seating arrangement. The structured knowledge questionnaire and 4 point likert scale was administered on day one. It took 30 minutes for the nurses to answer the questions followed by this the booklet on self instructional discharge protocol for CABG clients was given to all the samples. At end of the 7^{th} day the post interventional level of knowledge and attitude was assessed using structured knowledge questionnaire and modified 4 point likert scale respectively.

The data collected was analysed and interpreted based on the objectives and null hypothesis using descriptive and inferential statistics. The findings revealed that there is a significant improvement in level of knowledge and attitude after provided with booklet.

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Main findings of the study revealed that

In the pre test most of the nurses had moderately adequate knowledge on self instructional discharge protocol regarding pain management, drug therapy, lifestyle modifications and follow up. The overall pretest knowledge revealed that most of the nurses had moderately adequate knowledge and few nurses had adequate knowledge.

In the post test most of the nurses had adequate knowledge regarding pain management, wound care and hygiene, drug therapy, lifestyle modification, warning signs of complications and follow up. The overall post test level of knowledge revealed that almost all the nurses had adequate knowledge.

The administration of self instructional discharge protocol has enhanced the post test level of knowledge of nurses. This is a well proven fact that previous research evidences that proper teaching program enhances the knowledge among nurses.

In pretest most of nurses 90.20% had moderately favourable attitude and few nurses 9.80% had favourable attitude and after administration of self instructional discharge protocol the researcher found that in the post test 96.08% nurses had favourable attitude and few nurses 3.92% had moderately favourable attitude towards self instructional discharge protocol for CABG clients.

This shows that after administration of intervention the nurses developed positive attitude towards self instructional discharge protocol for CABG clients.

While correlating the post test level of knowledge with attitude the karl Pearsons's r value r 0.317 shown positive correlation. It proves that self instructional discharge protocol administered by the investigator showed significant improved the knowledge of nurses. When knowledge increases attitude also increases.

The demographic variables position held in the ward had shown mild statistically significant association with mean differed knowledge score and attitude score among nurses regarding self instructional discharge protocol for CABG clients at $p<0.01$ and $p<0.05$ level respectively. The other variables had not shown statistically significant association regarding self instructional discharge protocol.

CONCLUSION

The present study assessed the effectiveness of self instructional discharge protocol for CABG clients on knowledge and attitude among nurses at Nooral Islam Institute of Medical Science Hospital, Trivandrum. The findings of the study revealed that by enhancing the nurse's knowledge we can ensure favourable attitude. Hence, self instructional discharge protocol for CABG clients can be utilized by the nurse's to provide effective care to CABG clients at the time of discharge.

6.3 IMPLICATIONS

The investigator has put forward the following implications from the study which is of crucial concern for nursing practice, nursing education, nursing administration and nursing research.

6.3.1 Nurse education

- Nursing education is the foundation on which the nursing practice is built upon. Sound knowledge creates and ensures delivery of sound practice. Hence the protocol should be included in nurse's education curriculum as well as in continuing refresher nursing education program.
- Education has a positive impact on retention of knowledge, attitude and practice in all nurses. There is a need to develop a system of continuing education to reduce the incidence of error during discharge instruction.
- In service education, refresher course and training programs on discharge instruction should be systematically planned and regularly conducted for nurses to keep them updated.

6.3.2 Nurse Practice

- Nurse's play a vital role in giving safe and effective nursing care to the clients. By enhancing the nurse's knowledge regarding self instructional discharge protocol for CABG clients, we shall ensure a safe and sound practice.
- Self instructional discharge protocol for CABG clients helps nurses to provide uniform and wholesome package of discharge instruction for CABG clients. This help to boost the image of the nurses as an indispensible member of the health care team with their own scientific body of knowledge and scope of practice. The discharge instruction protocol should be useful for all CABG clients. It will minimize the re-admission of clients to the hospital.

6.3.3 Nurse administration

- Nurse as an administrator plays an important role in educating the professionals and in policy making. Nurse administrators should facilitate and encourage nurses to update their knowledge and practice on discharge instruction strategies by organizing in service education program.
- Nurse Managers are in a position to prepare policies, protocols and enhance its use in the hospitals. Nurse managers can strengthen interdisciplinary and multidisciplinary collaboration with researchers.
- Nursing leader in the hospitals and accrediting bodies can implement policies to make sure that nurses in India practice uniform protocol and guidelines.

Nurse Managers are in a position to prepare policies, protocols and enhance its use in the hospitals. They can facilitate the conduction of in- service educations, periodic conferences, workshops and seminars on various aspects of discharge instruction for CABG clients which will enable the staff nurses to update their knowledge on recent advancements.

6.3.4 Nursing Research

- The essence of research is to build up a body of knowledge in nursing. The findings of the present study serve as a basis for other professionals and the student nurses to conduct further studies and to find out the effectiveness of various methods of providing education.
- In India, the research studies related to assessment of knowledge of nurses on discharge protocol was very few. Student researchers can be motivated to conduct studies in this area.
- The nurse researchers should encourage the staff nurses to implement the research findings in their daily care and bring out more techniques to promote health of the clients.
- The findings of the study can be disseminated to nurse practitioners and student nurses through internet, journals, literature etc.
- The finding of the study will help the professional nurses and nursing students to gain knowledge on discharge protocol for CABG clients.

6.3.5 RECOMMENDATIONS

1. The investigator encourages the use of discharge protocol for CABG clients in Nooral Islam Institute of Medical Science Hospital, Trivandrum and Dr. Kamakshi Memorial Hospital, Chennai.
2. The investigator recommends the utilization of booklet on self instructional discharge protocol by the student nurses of Omayal Achi College of Nursing and its affiliated hospitals to provide discharge education to the CABG clients.
3. Similar study can be replicated on larger population to increase the validity and generalizability of findings.
4. A true experimental study can be conducted to assess the effectiveness of the discharge protocol for CABG clients.

5. A study can be conducted to evaluate the quality of life among caregivers of CABG patients.
6. A study can be conducted to evaluate the quality of nursing care after implementation of discharge protocol.

6.3.6 LIMITATIONS

1. The investigator found difficulty in getting setting permission from the hospital, to conduct the study
2. The investigator found difficulty in getting related Indian Reviews related to self instructional discharge protocol for CABG clients.

6.3.7 RESEARCH DISSEMINATION

1. Pilot study findings will be presented in upcoming National conference.
2. Research findings of the main study were presented in the 4th International Conference at Omayal Achi College of Nursing.
3. Research results will be published in Online Journal of ICCR, www.iccrjnr.com.
4. Research findings will be communicated through posters and newspaper articles.

6.3.8 PLAN FOR UTILIZATION OF RESEARCH FINDING

The research findings will be communicated to the administrators and nurses in the cardiac settings for utilization by implementing CABG discharge protocol during the time of discharge in NIMS Hospital, Trivandrum.

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APPENDICES

APPENDIX – C

LATTER SEEKING EXPERT'S OPINION FOR CONTENT VALIDITY

From

Ms. D. Anisha Mary
M.Sc. (N) 2014 – 2016 batch,
Omayal Achi College of Nursing,
Puzhal, Chennai- 600 066.

To

Respected Madam /Sir,

Subject: Requisition for expert opinion on suggestion for content validity of the tool.

I am Ms. D. Anisha Mary doing my M.Sc Nursing II year specializing in Medical surgical Nursing, sub specializing in Cardio Thoracic Nursing at Omayal Achi College of Nursing under the guidance of Dr. Mrs. S. Kanchana, Research Director ICCR and Speciality Guide Mrs. Sasikala. S, Assistant Professor. As a part of my research project to be submitted to The Tamil Nadu Dr. M. G. R Medical University and in partial fulfillment of the University requirement for the award of M.Sc. (N) degree, I am conducting **"A pre experimental study to assess the effectiveness of self instructional discharge protocol for Coronary Artery Bypass Graft clients on knowledge and attitude among nurses at selected hospital, Trivandrum".** I have enclosed my data collection tool and Intervention tool for your expert guidance and validation. Kindly do the needful.

Thanking you,

Yours Sincerely,

(D.Anisha Mary)

Enclosures:

1. Research proposal
2. Data collection tool
3. Intervention tool
4. Content validity form
5. Certificate for content validity

LIST OF EXPERTS FOR CONTENT VALIDITY

MEDICAL EXPERTS

1. **Dr. Mahadevan. R**
   Chief Consultant Cardiac Surgeon,
   NIMS Heart Foundation, Neyyattinkara,
   Trivandrum.

2. **Dr. Jaganathan. R**
   Additional Chief Health Director,
   Department of Cardio- Thoracic & Vascular Surgery,
   Southern Railway Headquarters Hospital, Ayanavaram,
   Chennai.

3. **Dr. Ganapathy Subramaniam. K**
   Consultant Paediatric and Adult,
   Congenital Cardiac Surgeon,
   Fortis Malar Hospital, Adayar,
   Chennai.

MEDICAL SURGICAL NURSING EXPERTS

4. **Mrs. Amuthu. A**
   Vice Principal,
   P.S College of Nursing,
   Thalakulam,
   Kanya Kumari.

5. **Dr. Sharmila Jansi Rani. S. S**
   Professor,
   Christian College of Nursing,
   Neyyoor,

Kanya Kumari.

6. **Mrs. Sathia Sweetly. S**
   Associate Professor,
   Global College of Nursing,
   Nattalam,
   Marthandam.

CERTIFICATE FOR CONENT VALIDITY

This to certify that the data collection and intervention tool developed by Ms.D. Anisha Mary M.Sc. Nursing I year student of Omayal Achi College of Nursing for her study **"A pre experimental study to assess the effectiveness of self instructional discharge protocol for Coronary Artery Bypass Graft (CABG) on knowledge and attitude among nurses at selected hospitals, Trivandrum."** under the guidance of Dr. S. Kanchana, Research Director, ICCR and Mrs. Sasikala. S, Assistant Professor, is validated by the undersigned and she can proceed with this tool to conduct the main study.

Signature :

Seal :

APPENDIX – D

CERTIFICATE OF ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. D. Anisha Mary, M.Sc. (Nursing) II year student of Omayal Achi College of Nursing Chennai, conducted a dissertation work on **"A Pre experimental study to assess the effectiveness of self instructional discharge protocol for Coronary Artery Bypass Clients (CABG) clients on knowledge and attitude among nurses at selected hospital, Trivandrum, 2015''** under the guidance of Mrs. Sasikala. S, Assistant Professor as a partial fulfilment of The Tamil Nadu Dr. M.G.R medical university requirement for the award of M.Sc Nursing degree is edited for English language appropriateness by _____

Signature with date

APPENDIX – F

INFORMED CONSENT REQUISITION FORM

Good morning,

I'm Ms. D. Anisha Mary M.Sc (Nursing) student from Omayal Achi College of Nursing, Chennai, conducting **"A Pre experimental study to assess the effectiveness of Self Instructional Discharge Protocol for Coronary Artery Bypass Graft clients on knowledge and attitude among nurses at selected hospital, Trivandrum"** as a partial fulfilment of the requirement for the degree of M. Sc Nursing under The Tamil Nadu Dr. M. G. R. Medical University.

I assure you that the information provided by you will be kept confidential. So, I request you to kindly co operate with me and participate in this study by giving your frank and honest responses to the questions being asked.

Thank you,

Signature of the investigator

D. Anisha Mary

INFORMED WRITTEN CONSENT FORM

I understand that I'm being asked to participate in a research study conducted by **Ms. D. Anisha Mary**, M.sc (Nursing) student of Omayal Achi College of Nursing. The research study will evaluate the effect of Self Instructional Discharge Protocol for Coronary Artery Bypass Graft (CABG) clients on knowledge and attitude among nurses at selected hospital. If I agree to participate in the study and no identification information will be included when it is transcribed. I understand that there are no risks associated with this study.

I realize that I may participate in the study, and the knowledge gained from this study may help either me or other people in the future. I realize that my participation in this study is entirely voluntary, and I may withdraw from the study at any time I wish. If I decide to discontinue my participation in this study, I will be continued to be treated in the usual and customary fashion.

I understand that all the study data will be kept confidential. However this information may be used in nursing publications or presentations. If I need to, I can contact **Ms. D. Anisha Mary**, Omayal Achi College of Nursing, 45, Ambattur road, Puzhal, Chennai anytime during the study.

The study has been explained to me. I have read and understood this consent form, all of my question has been answered, and I agree to participate. I understand that I will be given a copy of this signed consent form.

Signature of the participant: Date:

Signature of the investigator: Date:

APPENDIX – G

DATA COLLECTION TOOL

SECTION-A DEMOGRAPHIC VARABLES

Instructions-please tick your response to the questions

1. Age (in years) ____
   a) 21- 25
   b) 26- 30
   c) 31- 35
   d) > 36

2. Gender
   a) Male
   b) Female

3. Educational status
   a) G.N.M
   b) B.Sc. Nursing
   c) P.B.B.Sc. Nursing
   d) M.Sc. Nursing

4. Total years of experience
   a) 6 months -1
   b) 2 – 3
   c) 4 - 6
   d) > 6

5. Position held in the ward
   a) Staff nurse
   b) Senior nurse
   c) Ward in-charge

6. Any previous exposure to IEC on CABG Discharge Protocol in the past 5 years

a) Yes
b) No

If “yes” specify source

a) In-service training
b) Outside hospital CNE
c) Self learning

PART - B STRUCTURED KNOWLEDGE QUESTIONNAIRE

Instructions -Please tick an appropriate response of your choice to all the questions given below

A. Pain management:

1. The level of pain experienced by the patient 3-6 weeks after CABG surgery is
    a) no pain
    b) mild – moderate
    c) severe
    d) extreme

2. The alternative pain management measures are
    a) using pillows
    b) mild activity with intermittent rest
    c) massaging the incision area
    d) guided imagery

3. The common pain medication prescribed for CABG treatment following discharge is
    a) strong opioids (morphine)
    b) weak opioids (codeine)
    c) non- opioids (aspirin)

B. Wound care and hygiene:

4. Heavy lifting and extremes of shoulder movement should be avoided for
    a) 1 – 3 wks
    b) 4 – 6 wks
    c) 7 – 8 wks
    d) 9 – 12 wks

5. Temperature of water used to shower every day should be
    a) hot
    b) warm
    c) normal
    d) cold

6. Incision must be cleansed every day with

a) spirit
b) soap and water
c) saline
d) oil

7. Common complication after CABG is

a) wound infection
b) acute kidney injury
c) venous thromboembolism
d) pleural effusion

C. Drug therapy:

8. Most common side effects of NSAIDS are

a) gastric ulcer, bleeding, kidney failure
b) headache, hypotension, dizziness
c) heart failure, stroke, irritable bowel syndrome
d) hypertension, anemia, gastric ulcer

9. The group of drugs that prevent the clumping of platelets in the blood is

a) thrombolytic
b) anti coagulant
c) anti fibrinolytic
d) anti platelet

10. The drug which helps in lowering Lipid levels is

a) Aspirin
b) Captopril
c) Statin
d) Nitroglycerin

11. The combination of drug predominantly prescribed for CABG clients on discharge is

a) anti inflammatory, nitrates, strong opioids
b) steroids, ACE inhibitors, anti-platelet

c) anti platelet, lipid lowering therapy, anti inflammatory
d) strong opioids, steroids, lipid lowering therapy

D. Life style modification (diet, exercise, sleep, stress alleviation):

12. Type of exercise to be done after surgery
    a) aerobic
    b) metabolic
    c) strength training
    d) flexibility

13. The recommended frequency of exercise per week is
    a) daily
    b) 1 - 3 times a week
    c) 3 - 5 times a week
    d) 5 – 8 times a week

14. The recommended total calorie intake for CABG client is
    a) 2500 kcal/day
    b) 2000 kcal/day
    c) 1500 kcal/day
    d) 1000 kcal/day

15. Type of diet recommended after CABG
    a) high protein
    b) high carbohydrates
    c) high calorie
    d) high fiber

16. Foods to be avoided by CABG clients is
    a) fried food
    b) smoked food
    c) grilled food
    d) preserved food

17. Two activities that can shift the edges of client sternum apart and should be avoided are
    a) exercise and driving
    b) lifting objects heavier than 2.5 kg and driving
    c) lifting objects heavier than 1.5 kg and exercise
    d) lifting objects heavier than 2 kg and exercise

18. Following discharge after surgery, the activities of the client must be
    a) no activity
    b) same activity as pre operative period
    c) less activity than pre-operative period
    d) more activity than pre-operative period

19. The technique helpful for people with stress is
    a) reduced physical activity
    b) excessive physical exercise
    c) diversion therapy
    d) relaxation technique

E. Warning signs of complications:

20. Health care provider should be contacted immediately in case of warning symptoms like
    a) loss of appetite, vomiting, pain
    b) continuous fever, pain, redness at incision site
    c) excessive sweating, fever, vomiting
    d) redness at incision site, pain, loss of appetite

21. Indication of sudden weight gain after CABG
    a) heavy diet
    a) fluid retention
    b) lack of physical activity
    c) excessive rest period

22. Co morbid illness which may increase the risk of complication after CABG

a) diabetes mellitus
b) vascular dysfunction
c) pulmonary embolism
d) dysarrythmias

F. Follow up:

23. Duration for follow up after discharge is

a) once a week
b) once in 1 – 3 wks
c) once in 3 – 6 wks
d) once in 6 – 8 wks

24. Ideal time to check weight

a) every day morning at same time
b) every day afternoon at same time
c) every day evening at the same time
d) every day night at the same time

25. Average weight lifting permitted for the CABG client is

a) 1 pound (0.5 kg)
b) 5 pounds (2.5 kg)
c) 10 pounds (5 kg)
d) 12 pounds (6kg)

SCORING AND INTERPRETATION:

SCORE	PERCENTAGE	INTERPRETATION
≥19	>75%	Adequate knowledge
13-18	51-75%	Moderately adequate knowledge
≤ 12	≤ 50%	Need to improve

ANSWER KEYS FOR STRUCTURED KNOWLEDGE QUESTIONNAIRE

1. B	**14. C**
2. A	**15. D**
3. C	**16. A**
4. C	**17. B**
5. B	**18. C**
6. B	**19. D**
7. A	**20. B**
8. A	**21. B**
9. D	**22. A**
10. C	**23. C**
11.C	**24. A**
12.A	**25. B**
13.C	

MODIFIED 4 POINT LIKERT SCALE DEVELOPED BY THE INVESTIGATOR FOR ASSESSMENT OF ATTITUDE TOWARDS CABG DISCHARGE PROTOCOL

INSTRUCTIONS: Please tick an appropriate response of your choice to all the questions given below

S.No.	Components	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Client is fit to be discharged once pain subsides.				
2.	Taking shower in hot water affects circulation and causes dizziness				
3.	If clients misses a dose, both the missed dose and the next dose can be taken at the same time				
4.	Loss of appetite can be controlled by taking large meals of client's choice				
5.	Long distance walks (for at least 20 minutes) at frequent intervals promotes early recovery				
6.	Lack of exercise can increase risk for clot in blood vessels				
7.	Smoking and high stress worsens post surgery health recovery				
8.	Client can engage in sexual activity 2 -3 weeks onwards after recovery from surgery				
9.	Cardiac rehabilitation helps the client to regain his/her normal life pattern				
10.	Regular follow up is done to prevent further complications				

SCORING KEY

Consists of 10 statements 5 (+) and 5 (-) rated on a scale from 1- 4. Positively worded statements are scored as follows

SCORING AND INTERPRETATION

TYPE OF RESPONSE	POSITIVE STATEMENTS	NEGATIVE STATEMENTS
Strongly agree	4	1
Agree	3	2
Disagree	2	3
Strongly disagree	1	4

Interpretation:

SCORE	PERCENTAGE	CATEGORY
≤ 20	≤ 50%	Unfavorable attitude
21-29	51-75%	Moderately favorable
≥ 30	>75%	Favorable

APPENDIX – H

CODING FOR DEMOGRAPHIC VARIABLES

SECTION – A DEMOGRAPHIC VARIABLES	Code
1. Age in years	
a) 21 – 25	1
b) 26 – 30	2
c) 31 – 35	3
d) > 36	4
2. Gender	
a) Male	1
b) Female	2
3. Educational status	
a) GNM	1
b) B.Sc. Nursing	2
c) P.B.B.Sc. Nursing	3
d) M.Sc. Nursing	4
4. Total years of experience (in years)	
a) 6 months – 1 year	1
b) 2 – 3 years	2
c) 4 – 6 years	3
d) > 6 years	4
5. Position held in the ward	
a) Staff nurse	1
b) Senior nurse	2
c) Ward- in – charge	3
6. Previous exposure to IEC	
a) Yes	1
b) No	2

APPENDIX – I

BLUE PRINT OF DATA COLLECTION TOOL

S.NO.	CONTENT	ITEM	TOTAL ITEM	PERCENTAGE
1.	Demographic Variables	1 - 6	6	100 %
2.	Structured knowledge Questionnaire			
	• Pain management	1 - 3	3	12 %
	• Wound care and hygiene	4 - 7	4	16 %
	• Drug therapy	8 - 11	4	16 %
	• Life style modifications (diet, exercise, sleep, stress alleviation)	12 - 19	8	32 %
	• Warning signs of complications	20 - 22	3	12 %
	• Follow up	23 - 25	3	12 %
3.	Attitude Scale			
	• Positive statements	1 - 5	5	50 %
	• Negative statements	6 - 10	5	50 %
	Total	**35**	**35**	**100 %**

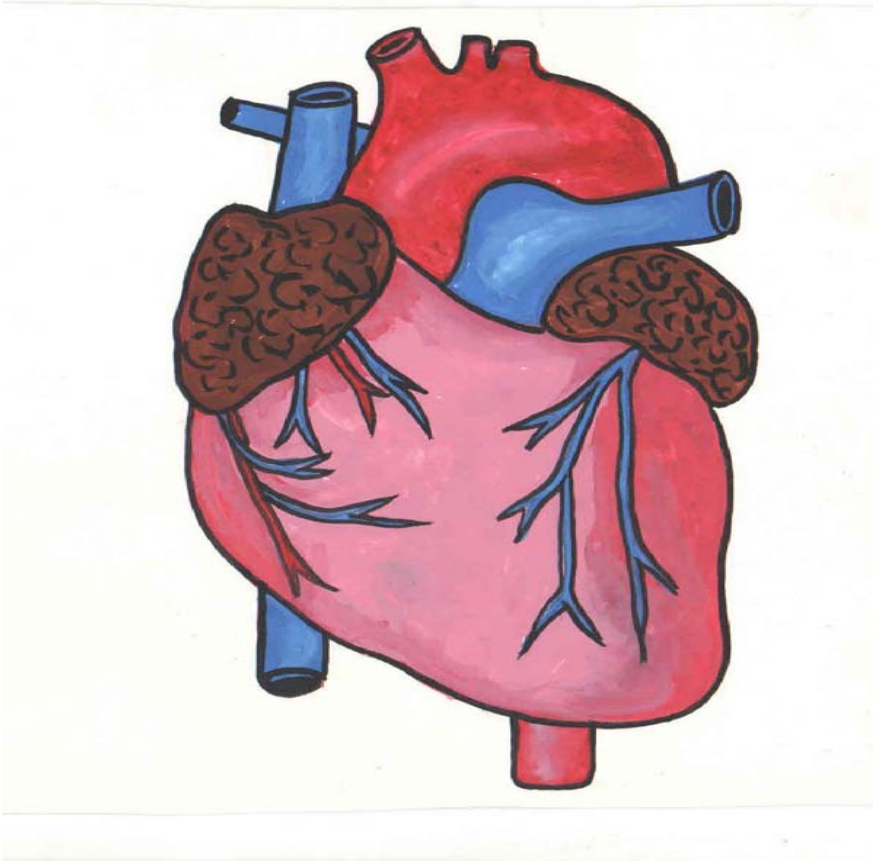
APPENDIX – J

INTERVENTION PROTOCOL

- Self instructional discharge protocol (English)

- Booklet on self instructional discharge protocol
    - ✓ Pain management
    - ✓ Wound care
    - ✓ Drug therapy
    - ✓ Life style modification(diet, exercise, sleep and stress alleviation)
    - ✓ Warning signs of complications
    - ✓ Follow up

SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CORONARY ARTERY BYPASS GRAFT (CABG) CLIENTS



Prepared By,

Ms. D. Anisha Mary
M.Sc (N) II year (2014 – 2016)
Omayal Achi College of Nursing,
Puzhal.

AUTHORS INFORMATION

I am Ms. D. Anisha Mary doing my M.sc Nursing I year, specializing in Medical Surgical Nursing at Omayal Achi College of Nursing at Puzhal, Chennai. As a partial fulfillment of the programme, I'm doing a study on **"self instructional discharge protocol for CABG clients".**

I have prepared a module for self instructional discharge protocol after extension review of various sources, I'm sure that it will be useful for you. So kindly co-operate with me, by giving frank and valuable answers. For any further clarification you contact me in the mobile no: **9003925651.**

OBJECTIVES

GENERAL OB JECTIVE:

At the end of module the staffs will gain indepth knowledge regarding discharge protocol for CABG protocol and develop positive attitude in giving instruction regarding self instructional discharge protocol

SPECIFIC OBJECTIVES:

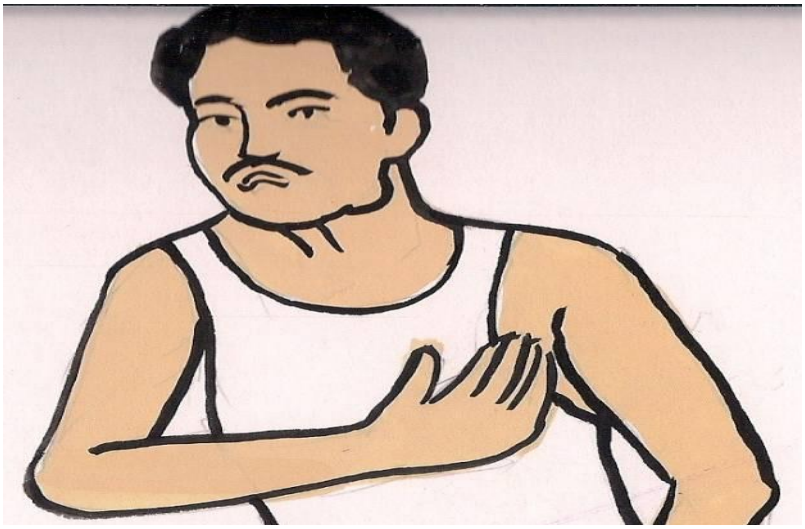
At the end of the module the staff will be able to gain information regarding

1. Pain management
2. Wound care
3. Drug therapy
4. Life style modification (diet, exercise, sleep and stress alleviation)
5. Warning signs of complications
6. Follow up

TABLE OF CONTENTS

SELF INSTRUCTIONAL DISCHARGE PROTOCOL FOR CABG CLIENTS

1. *PAIN MANAGEMENT:*



- If your pain is kept under control your recovery will be fast
- Pain should be mild - moderate at the time of follow up
- Some patients experience pain in chest and shoulder is usually due to muscle and bone aches, not due to angina
- Client may feel pain while moving around, sitting up, coughing or walking after recovery

1.1 Pain medication tips:

- Always have your pain pills with you
- Wear comfortable clothes for the trip
- Don't take double dose of medication when you have trouble in sleeping
- Taking pain medication at bed time will induce sleep
- Use pillow to support when you sleep, during coughing and deep breathing exercises
- Continue to use heating pads and other alternation methods for pain control
- Try not to miss any doses of medication, if you misses a dose take it as soon as possible

- Don’t take the missed dose and the next dose at the same time
- Avoid using counter drugs or herbal supplements without doctor’s prescription
- Store medication away from heat and direct light
- Keep medication in a container with labeling and the direction for taking the medication

1.2 Alternative to pain medication:

- **Heating pads**
  Use heating pad for muscle ache. Don’t place heating pad against incision site
- **Pillows**
  Cushion the chest incision as well as help with pain during coughing and deep breathing exercises, avoid wound gapping during coughing
- **Surgical bra**
  Women should wear a non- underwire surgical bra 24 hrs a day for one month after surgery
- **Guided imagery**
  Relaxation technique that relieve stress and creates a sense of peace and tranquilizers

2. ***WOUND CARE:***

DO’s:

- Clean the incision every day with soap and water
- Gently pat the area of the incision to dry it
- Keep the arms close to your sides when you getting out of bed or a chair
- Take warm shower every day

- Apply antiseptic, such as povidone -iodine to the incision after shower
- Inspect your incisions every day
- Check for excessive pain, redness, swelling in incision area
- Keep swollen arm or leg elevated
- Wear special supportive hose

DONT's:

- Let anyone pull on your arms for any reason.eg)getting out of bed
- Lift anything heavier than 5 lb(2.5 kg) including small children, trash baskets
- Not to do even light housework for at least 2-3 weeks
- Use creams, powders, lotions or oils on incision site
- Avoid extreme of shoulder movement.(eg. tennis, base ball and golf) for 6-8 weeks post surgery
- Over exposure your incisions to sunlight
- Driving (even a minor car accident cause chest to hit the steering wheel) for at least 6 weeks

3. ***DRUG THERAPY:***

- **Anti-platelet eg. Aspirin**

  Action: help to prevent the formation of blood clot

  Dosage: 75 – 150 mg, once a day, orally

  Side Effects:

  Nausea, pain, buzzing or ringing in ears

  Abdominal or stomach pain, cramping, burning

Signs of bleeding (e.g. unusual nosebleeds, bruising, bleeding gums, cuts that don't stop bleeding)

- **β-blockers eg. atenolol**

Action: slow the heart rate, lower blood pressure and decreases the heart's demand for oxygen

Dosage: 25, 50 mg twice a day, orally as prescribed by physician

Side effects:

Dizziness, tiredness, blurred vision, cold hands and feet , slow heartbeat, diarrhea, nausea

- **Lipid lowering therapy eg. statin**

Action: helps in lowering the lipid level and it halt the progression of atherosclerosis in native and graft vessels

Dosage: 10 -20 mg two times a day, orally

Side effects: nosebleed, sore throat, runny or blocked nose, headache, diarrhea, constipation, indigestion, muscle or joint pain, hyperglycemia

- **NSAID'S eg. ibuprofen**

Action: reduces swelling and inflammation and will remove mild to moderate pain associated with swelling

Dosage: 200 mg four times a day, orally as prescribed by the physician

Side effects: **s**tomach upset, dizziness, gastric ulcer, bleeding, renal failure

Contraindications: kidney problems, patient taking medication such as Coumadin (warfarin)

4. ***LIFE STYLE MODIFICATION (DIET, EXERCISE, SLEEP AND STRES ALLEVIATION)***

4.1 EXERCISE:

Goal:

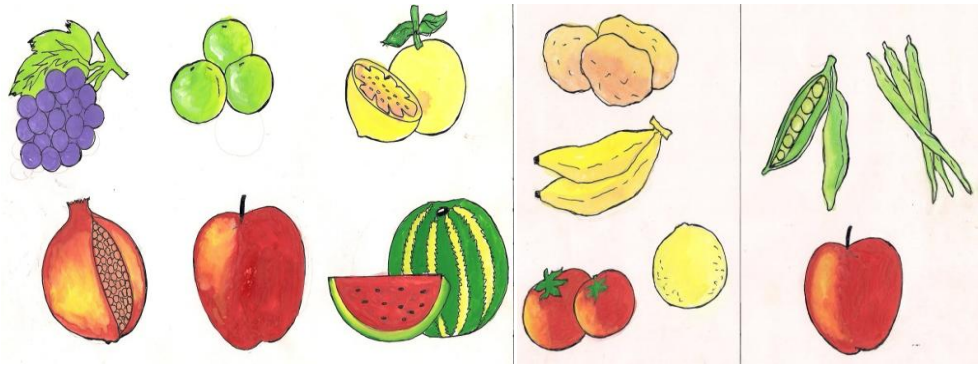
- Mainly done to improve the cardiac health
- Assess the potential risk of heart and blood vessel complication from exercise
- Increase the stamina
- Maintain ideal weight by burning calories
- Lower stress in your everyday life

Type of exercise: aerobic exercise like jogging, walking, cycling, rowing.
Frequency: 3-5 times a week
Content and duration: 5 -10 mins - warm up phase
20 mins – conditioning phase
5 -10 mins - cool down phase

4.1.1 Tips for exercising after CABG:

- Take several walk each day
- Spread the walk throughout the day
- Don't overdo it: stop and rest if you get tired
- Gradually increase the distance and duration of your walks throughout the day
- Don't walk by yourself
- Take stair at a slow pace
- Don't exercise if the weather is too cool or too hot
- Wear comfortable shoes while walking
- Take someone with you for first time you walk
- Make sure that you are exercising too hard

4.2 DIET:



Tips for healthy eating:

- eat a variety of healthy foods
- choose food low in fat and cholesterol
- eat less salt or sodium

4.2.1 Fruits and vegetables:

- **antioxidant food** enhance immune system and help to prevent infection and disease
  eg: berries, citrus fruits, apples, kiwi, papaya, mango, tomato, carrots, sweet potatoes, leafy greens, bell peppers**.**

4.2.2 Whole grains:

- provide rich amount of nutrients and fiber, important for digestive wellness, weight
  eg: whole wheat, whole oats, wheat berries, brown rice flour, wild rice, grain bread

4.2.3 Recommended fat intakes:

- limiting total fat intake to 25 – 30 % of total calorie intake
- limiting dietary cholesterol to less than 200 mg per day
- have 2 serving of fish a week and limit oil to 6 tsp. per day, including for cooking

4.2.4 Increased intake of omega -3 fatty acids:

- it is found in fish such as salmon, herring, tuna, lake trout, sardines
- cooking oil such as olive oil, safflower, canola

- nuts such as soy nuts, walnuts, butternuts(same as walnuts)

4.2.5 Reduced intake of saturated fatty acids:

Avoid the following foods:

- fried foods, fatty meals, poultry with skin, regular cheeses
- coconut oil, palm kernel oil, palm oil

4.2.6 Recommended sodium:

- limit sodium intake to 2000mg/d
- high sodium food to be avoided include canned soups, canned meats, canned vegetables, pickle, chips, soy sauce

4.2.7 Recommended calorie:

- not more than 1600 kcal/day

4.2.8 Recommended fiber:

- 20 to 30 g of fiber a day, from fruits, vegetables and whole grains.
- Fiber helps reduce LDL cholesterol and increase high-density lipoprotein cholesterol, the "good" cholesterol

4.3 STRESS:

- Stress increase the risk of heart attack, stroke, chest pain

4.3.1 Stress reduction techniques:

- **Group psychotherapy** - allow to compare their experience with stress and heart disease and support one another's attempts at more effective management
- **Relaxation technique** – relieve musculoskeletal tension it include meditation, progressive muscle relaxation, self-hypnosis, biofeedback
- Biofeedback may be helpful for patient with chronic stress
- **Group skill-building exercise:** help to learn about living with stress and heart disease, way to avoid negative thinking and to deal with stress

4. SEXUAL ACTIVITY:

Points to remember:

- Resume sexual activity 6 - 8 weeks of surgery after getting physician opinion
- Talk honestly to your partner about concerns and feelings
- Choose time when you relaxed and comfortable in a place that free from interruptions
- Wait for 1 -3 hours after eating full meals so that digestion can take place
- Be aware that anxiety to either partner will interfere with sexual arousal and performance

5. ***WARNING SIGNS OF COMPLICATIONS:***

- Chest pain or return of the heart symptoms same like before symptoms
- Fever above 101.4 F
- Signs of infection (redness, swelling, drainage, warmth) at the incision site
- Weight gain of more than 1.5 kg in 24 hrs or more than 3kg in a week
- Increased swelling in hands, feet or ankles
- Shortness of breath, dizziness, fainting, unusual bleeding
- Coughing up blood or yellow or green mucus
- Unrelieved pain at the incision site
- Worsened pain in chest or around the incision

6. FOLLOW-UP:

- Duration to follow- up after discharge is 3 – 6 weeks
- Sudden increase in weight indicate sign of fluid retention
- Check weight at the same time every morning
- Maintain record of client weight daily
- Should bring record when visiting doctor
- Average weight lifting permitted is about 5 pound(2.5 kg)

SELF EVALUATION:

1. ***PAIN MANAGEMENT:***

1. Some patient experience pain in shoulder and chest usually due to _____
2. Without doctor's prescription avoid using _____
3. Heating pads are used for _____
4. After recovery client may feel pain while _____
5. Using pillows during coughing and deep breathing exercise avoid _____

2. ***WOUND CARE:***

1. Clean incision with soap and water (TRUE/ FALSE)
2. Swollen arms and legs should be hanged down (TRUE/ FALSE)
3. Driving can be done immediately after recovery (TRUE/ FALSE)
4. Avoid using powders, lotions or oils on the incision site (TRUE/ FALSE)
5. Expose the incision to sun light (TRUE/ FALSE)

3. ***DRUG THERAPY:***

1. Example and dosage for Anti-platelet _____
2. Action for β- blockers _____
3. Common side effects of NSAID'S _____
4. Statin help to reduce _____

4. *LIFE STYLE MODIFICATION (DIET, EXERCISE, SLEEP AND STRESS ALLEVIATION):*

1. Exercise is done to improve _____
2. Food to enhance immune system is _____
3. High density lipoprotein is _____
4. Biofeedback is used for patient with _____
5. The activity that interfere sexual arousal and performance _____

5. *WARNING SIGNS OF COMPLICATIONS AND FOLLOW UP:*

1. Signs of infection are _____
2. Co morbid illness which increase risk of complication are _____
3. weight gain increase more than _____
    a) per day
    b) per week
4. Sudden weight gain indicate _____
5. Every day check weight at _____

KEY ANSWERS:

1. ***PAIN MANAGEMENT***

2. Muscle and bone aches
3. Counter drugs and herbal supplements
4. Muscle aches
5. Moving, sitting up, coughing or walking
6. Wound gapping

2. ***WOUND CARE:***

1. True
2. False
3. False
4. True
5. False

3. ***DRUG THERAPY:***

1. Aspirin, 75-150 mg
2. Slows heart rate, lower blood pressure, decreases heart demand for oxygen
3. Gastric ulcer, bleeding, renal failure
4. Lipid level

4. ***LIFE STYLE MODIFICATION (DIET, EXERCISE, SLEEP, STRESS ALLEVIATION):***

1. Cardiac health
2. Antioxidants
3. Good cholesterol
4. Chronic stress
5. Anxiety

5. WARNING SIGNS OF COMPLICATION AND FOLLOW UP:

1. Redness, swelling, warmth, drainage
2. Diabetes mellitus
3. a) 1.5 kg
   b) 3 kg
4. Fluid retention
5. Morning

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APPENDIX - K

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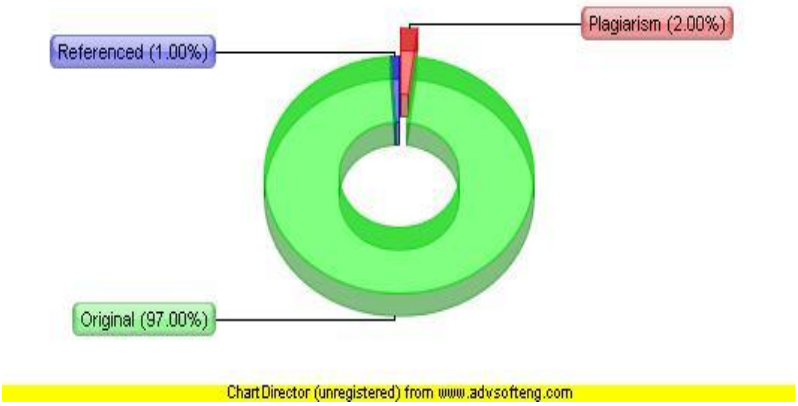

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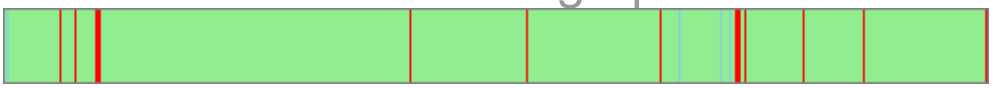

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APPENDIX – M

DISSERTATION EXECUTION PLAN - GANNT CHART																			
S.NO	**CALANDER MONTHS**	**Nov '14**	**Dec '14**	**Jan '15**	**Feb '15**	**Mar '15**	**Apr '15**	**May '15**	**June '15**	**July '15**	**Aug '15**	**Sep '15**	**Oct '15**	**Nov '15**	**Dec '15**	**Jan '16**	**Feb '16**	**Mar '16**	**Apr '16**
A	**Conceptual phase**																		
1	Problem identification																		
2	Literature review																		
3	Clinical fieldwork																		
4	Theoretical framework																		
5	Hypothesis formulation																		
B	**Design & planning phase**																		
6	Research design																		
7	Intervention protocol																		
8	Population specification																		
9	Sampling plan																		
10	Data collection plan																		
11	Ethics procedure																		
12	Finalization of plans																		
C	**Empirical phase**																		
13	Data collection																		
14	Data preparation																		
D	**Analytical phase**																		
15	Data analysis																		
16	Interpretation of results																		
E	**Dissemination phase**																		
17	Presentation or report																		
18	Utilization of findings																		
	Calendar months	**11**	**12**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	09	10	11	12	13	01	02	**03**